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ABSTRACT

This guide is designed to provide an introduction to the development of performance standards for youth employment and training programming. Addressed in the individual sections of the guide are the following topics: the roles and responsibilities of various parties involved in delivering services funded under the Job Training Partnership Act, the nature of competency-based programs, key concepts in competency-based instruction, examples of competencies, job market studies, translation of job duties and requirements into competency statements, criteria for competency statements, purposes of assessment, methods of assessment, selection of appropriate assessment instruments, design of program services to focus on competency attainment, and follow-up. A glossary and bibliography conclude the guide. Appendixes to the manual include a list of publishers' addresses as well as descriptions of various commercially available multidimensional, pre-employment and work maturity, basic educational skills, and job-specific skills assessment instruments. (MN)

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COMPETENCY-BASED INSTRUCTION

A GUIDE IN DEVELOPING YOUTH EMPLOYMENT COMPETENCIES

This guide has been made possible through a grant from the New York State Job Training Partnership Council.

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Table of Contents

		Page
I.	OVERVIEW	1
II.	ROLES & RESPONSIBILITIES	2
III.	NATURE OF COMPETENCY-BASED PROGRAMS	3
IV.	KEY CONCEPTS	4
V.	EXAMPLES OF COMPETENCIES	6
VI.	JOB MARKET STUDY	7
VII.	TRANSLATING JOB DUTIES & REQUIREMENTS INTO COMPETENCY STATEMENTS	8
VIII.	CRITERIA FOR COMPETENCY STATEMENTS	9
IX.	PURPOSES OF ASSESSMENT	10
X.	METHODS OF ASSESSMENT	11
XI.	SELECTING APPROPRIATE ASSESSMENT INSTRUMENTS	12
XII.	FOCUSING PROGRAM SERVICES & OPPORTUNITIES ON COMPETENCY ATTAINMENT	13
XIII.	FOLLOW UP	14
XIV.	GLOSSARY	15
XV.	BIBLIOGRAPHY	16

APPENDIX A

A. Multi-Dimensional Assessment Instruments
B. Pre-Employment & Work Maturity Assessment Instruments
C. Basic Educational Skills Assessment Instruments
D. Job-Specific Skills Assessment Instruments
E. Other Useful Assessment Instruments

APPENDIX B - PUBLISHERS' ADDRESSES

I. Overview

The Job Training Partnership Act introduces a results-oriented approach to employment and training programs. Deriving from this approach is the requirement that Service Delivery Areas and the State must monitor the performance of their employment and training programs according to specific outcome standards. For youth programs, the prescribed measures of program performance are: Entered Employment Rate, Positive Termination Rate, and Cost per Positive Termination. In the measurement of positive terminations, the attainment of youth employment competencies will be important criteria.

Therefore, this guide has been prepared to provide an introduction to the development of performance standards for youth employment and training programming. This information should prove useful since Service Delivery Area agencies soon will be working to develop competency systems.

Another reason for attention to this important area is the fact that educators have demonstrated that the learning process for youth can be improved by carefully specifying what is to be learned, describing how it will be measured, and designing activities focused on producing the desired learning. In vocational education and training, this improved instructional approach consists of defining employability and occupational competency-based learning.

The contents of the guide is based primarily on a publication of Brandeis University entitled, "An Introduction to Competency-Based Employment and Training Programming for Youth Under the Job Training Partnership Act" which has been prepared for the employment and training community. Supplemental information has been drawn from publications in Competency-Based Vocational Education (Cochran, L.; Hahn, A.).

The guide's development has included advice and suggestions from representatives of New York State's Department of Education and Labor, as well as Employment and Training Administrators.

The valuable assistance of these professional colleagues is deeply appreciated.

Statutory Provisions

JTPA PL 97-300

Sec 106(a) - The Congress recognizes that job training is an investment in human capital development. To determine whether that investment has been productive, the Congress has determined that it is essential that standards of performance for measuring the return on this investment be developed.

Sec 106(b) - In prescribing standards under this section, the Secretary of Labor shall designate factors for evaluating youth programs which in addition to employment and reduction in welfare shall be:

a. the attainment of employment competencies recognized by the Private Industry Council;

b. elementary, secondary and post-secondary school completion, or the equivalent thereof;

c. enrollment in other training programs or apprenticeships or enlistment in the armed services.

II. Roles & Responsibilities

The roles and responsibilities of federal, state and local jurisdictions relative to competency-based programs are as follows:

Federal

Establish the minimum requirements for competency-based employment and training programs for youth which are issued as regulatory guidelines by the U.S. Department of Labor.

State

Ensure that all Service Delivery Areas are in compliance with JTPA legislative requirements and regulations and with federally prescribed guidelines.

Establish some degree of consistency between SDA developed systems to assure the portability of competency certification among the SDAs within the State.*

Provide Private Industry Councils with assistance in developing workable competency standards and programs.*

Private Industry Councils

The Private Industry Council must certify the SDA competency-based system as one which reflects the needs and requirements of the local labor market.

With a membership that includes local employers, local educational agencies, organized labor, and economic development agencies, the PIC will be expected to have an extensive involvement in the development of competencies, benchmarks, and assessment tools for its youth programs.*

SDA Administrative Agency

Will assume a large part of implementing a competency-based youth employment and training system.*

*Recommended, but not legislatively required.

III. Nature of Competency-Based Programs

Competency-Based Programming Defined

Competency-based employability is an instructional approach built around specific measurable skills, knowledge and attitudes which have been identified through job analysis as needed in the work place. Its purpose is to improve the learning process by specifying what is to be learned based on specific tasks done by workers on the job; describing how learning will be measured; defining a measurable level of competence to be achieved which is stated in terms of performance standards; assessing the learner's knowledge and skill level and work-related attitudes at entry; providing learning experiences organized in a methodical sequence of steps focused on producing the defined competency outcomes; and evaluating what learning has taken place as compared with the learning objectives.

Advantages

A. Provides a clear picture of specific, attainable learning objectives which can be measured in terms that are clear both to program staff & participants.

B. Offers the participant a more realistic picture of the world of work and the labor market with respect to skills and competencies required.

C. Provides for a more realistic understanding of one's own skills, abilities, and preferences since it is focused on what a person actually does.

D. Focuses on individual needs through assessment and services that are provided to specifically address the skill needs identified.

E. Allows participants to learn at their own rate guided by ongoing performance ratings and evaluations.

F. Provides a framework that increases responsiveness to local labor market conditions and employer demands.

IV. Key Concepts

Competency-Based Instruction

The management of instruction which prepares the student to perform specific tasks and behaviors on the job and thus achieve employment success. Emphasis is on student outcomes in terms of competencies to be demonstrated, explicit criteria for assessing student competencies, and holding the student accountable for meeting predetermined criteria.

Validation of Competencies and Competency Statements

This process answers the question whether the attainment of defined competencies by the learner actually meets the expectations and hiring requirements of local employers as reflected by participants being employed. This should be a natural outcome of follow up and should ensure that both the needs of employers and the employability needs of participants are being met.

Analysis of Services to Determine Adjustment to Advance Competency Attainment

A competency-based system should provide services that produce a maximum of practical results and that are sufficiently rich in variety to allow for the tailoring of services to individual needs. Thus, participants should receive the specific training they need to become employed and succeed on the job. For these program qualities to be achieved, local employers can be a valuable resource in providing information and guidance in the development of training activities that increase the attractiveness of participants as job applicants. Of course, training activities that do not produce a demonstrable increase in the attractiveness and employability of participants should be eliminated from the program.

Development of an Appropriate System for Documentation

Employability Development Plans and Skill profiles are extremely important in providing feedback to youth in training and in helping youth to track their progress. Even more importantly, a certificate of program completion which identifies specific competencies attained has great value for youth as an introduction to prospective employers.

Information Sharing and Communication

Competency-based employment and training can be greatly enhanced through collaboration with other agencies, particularly schools. Therefore, the community should be kept amply informed of your efforts throughout the process of program development and implementation.

Monitor the System and Revise it Periodically

Each program is to some extent opening new ground. Therefore, careful monitoring is critical to determine whether the program is meeting its intended goals. This monitoring should include both process and outcome features. With respect to process, each participant should receive training and other services appropriate to his/her needs as prescribed by an individualized employability development plan. In addition, each participant's progress should be recorded systematically on skill profile sheets. With respect to outcome, it is vital that program performance be assessed by the extent to which program completers enter employment successfully.

IV. Key Concepts (cont'd)

Competency Areas

The U.S. Labor Department has identified the following areas for standards:

A. Pre-employment and Work Maturity Competencies
B. Basic Education Skills Competencies
C. Job Specific Skills Competencies

Competency

A term used to indicate a wide range of learnable outcomes which can include skills such as typing, repairing a carburetor, or filling out a job application; knowledge such as an awareness of the nature of job duties and requirements in important occupational clusters; attitudes such as regard for others, respect for authority; and behavior such as persistence on the job.

Competency Indicator

A specific behavior that is expected of the participant as a learning objective and that demonstrates the development of a competency. Competency indicators are expressed with an action verb and a noun. In the occupation of grounds keeping, for example, two competency indicators might be identifying fertilizing agents; applies fertilizer.

Benchmark

A measurable standard that shows the qualitative or quantitative extent to which participants are expected to demonstrate a behavior called for by a competency indicator. Examples of benchmarks in reference to the above-mentioned competency indicators for grounds keeping would be naming 5 types of fertilizer; fertilizing an area of 1/2 acre in 10 minutes.

Assessment

A consistent method for observing, recording and/or measuring behavior that reflects the extent to which learning objectives and competency standards have been achieved and that is used to reach decisions about participant assignments and learning tasks. Examples of assessment methods with respect to the above-cited grounds keeping competency indicators and benchmarks would be oral questions to name types of fertilizing agents; a timed observation of a fertilizing operation.

V. Examples of Competencies

Pre-Employment and Work Maturity Competencies	Basic Educational Skills Competencies	Job Specific Skills Competencies
* Understands major conditions and factors influencing successful job experiences and increasing job effectiveness. * Knowledge of the rules, customs, and basic facts of the work world. * Identifies career goals and how to achieve them based on personal and labor market information. * Has accurate knowledge of own values, interests, and aptitudes. * Shows responsibility and dependability in carrying out assigned tasks. * Accepts guidance, criticism, and assignments from supervisor. * Shows willingness to work and develop more advanced skills. * Maintains constructive and proper relationships with other workers. * Plans and organizes job responsibilities. * Demonstrates the ability to send clear messages and is able to correctly understand the messages of others. * Shows skill in human relations or socialization skills. * Shows skill in personal decision-making.	* Demonstrates mathematical skills. * Speaks, reads, writes English at levels commensurate with age and educational level. * Achieves educational promotions through the 12th grade and continues preparation toward the level required by occupational target(s). * Demonstrates knowledge of fundamental computer concepts, terms, and operations.	Demonstrates skills required for entry-level employment in a given industry or for a chosen career such as: a. Repair auto carburetor b. Install electrical fixture. c. Build bookshelf. d. Repair lawn mower. e. Take dictation. f. Design floral arrangement.

VI. Job Market Study

In developing any competency-based employment and training system the nature of the business and industrial community must be fully understood. This usually involves the following steps:

Enlist the Cooperation of the Private Sector

The involvement of local employers in the development of the competency-based system is strongly recommended. Some suggested strategies when working with employers are as follows:

A. Develop a clear statement of the purposes, goals and objectives of a competency-based system.

B. Work with the Private Industry Council and other local private sector intermediary groups to obtain the cooperation of local employers.

C. Develop a private sector Job Survey strategy.

Select Target Occupations

Based on current labor market information, occupations should be identified in which job openings exist or are expected.

Analyze Jobs in the Occupational Areas Selected

Specific information about jobs is gathered and used to construct a Job Inventory which lists all of the tasks and functions that are performed on the job and indicates the reading and math abilities, trade skills, knowledge and personal traits that are required. This information is gathered by a review of current literature on the specific nature of jobs (such as the Dictionary of Occupational Titles) and Job Surveys.

Methods by which Job Surveys are Conducted

A. interviews with employers, job supervisors, or employees
B. questionnaires sent to employers
C. on-site observations of jobs.

Suggestions for Kinds of Data to be Gathered in Job Inventories

A. Types of occupations

B. Functions and tasks performed by workers in each occupation

C. Statements of specific abilities, knowledge, and skills required for each function

D. Statements of desirable aptitudes, personal traits

E. The level of proficiency required for each ability, skill, or level of knowledge

F. Informal standards of performance or proficiency applied to the worker

G. Equipment, machinery, hardware and/or software used by worker

H. Other hiring and on-the-job requirements.

VII. Translating Job Duties & Requirements Into Competency Statements

Each job duty contained in a Job Inventory is translated into a competency and each task becomes a competency indicator. Proficiency requirements and on-the-job quality standards become benchmarks.

Competency - What is Being Done.

Competency Indicator - How the job is being done, should have beginning and ending within limited period of time, generally 10 competency indicators per competency.

Benchmark - Quantity and quality of work required.

E X A M P L E

Job Specific Skills - Kitchen Assistant (Competency Area)

Comp. No.		Ratings 1	2	3	4	5	6
01-01	Wash Dishes Using Various Types of Dish Washing Machines				✓		
	01 Identify dishwashing operations and clean dish handling procedures with no errors			✓			
	02 Set up and clean dish machines in 10 minutes with no assistance				✓		
	03 Wash and stack silverware - 10 pieces in 10 minutes			✓			
	04 Operate a disposal with no assistance and observing proper safety measures		✓				
	05 Identify and use proper soaps and sterilizers - no errors					✓	
	06 Operate utensil pot washer without assistance						✓

COMPETENCY

Competency Indicators & Benchmarks

Rating Scale

6 - Performs task/competency with exceptional ability.

5 - Performs task/competency with speed and quality.

4 - Performs task/competency at job entry.

3 - Performs task/competency with periodic assistance.

2 - Performs task/competency with constant assistance.

1 - Cannot perform this task/ competency satisfactorily.

*Brannon, Donald et al. Maryland Vocational Curriculum Production Project, 1978.

VIII. Criteria for Competency Statements

Criteria for Competencies and Competency Indicators

Importance	Clarity	Comprehensiveness
Each competency and indicator should describe an important skill, knowledge, attitude, or behavior that is critical for success in the world of work.	The required behaviors should be described clearly and should be readily understandable.	Indicators should include a range of skills, knowledge, attitudes and behaviors by which youth can demonstrate their competencies. Thus, trainees in carpentry should be able to cut and fit molding, define carpenter terminology, respect the supervision of master carpenters, and practice acceptable safety procedures.
Freedom from Stereotyping	**Measurability**	**Manageability**
Competency statements and indicators should be free of wording that would suggest that some social, occupational or life roles are valued more than others. Each competency should be applicable across lines of sex, socio-economic status, race, rural and urban settings, and religious persuasions.	It should be possible to establish an assessment approach and measurement device for each competency.	Competencies and competency indicators should be realistically possible with the resources available and within the prescribed timetable of the program.

Criteria for Benchmarks

Clarity	Acceptability	Measurability
The standard of performance expected should be clear and unambiguous.	Each benchmark should be acceptable to employers.	The achievement of each benchmark should be measured.

IX. Purposes of Assessment

The purposes of assessment fall into three categories, each referring to different points of time in the total assessment strategy as follows:

Initial Planning Assessment

Designed to help determine incoming applicants' strengths and weaknesses so that appropriate services can be planned.

Characteristics

* identifies applicant's deficiencies in competency areas.
* identifies applicant's abilities, talents, strengths.
* varies depending on available program options choice of initial assessment measures should be matched to available program options.
* used by program administrators to shape program activities and services in accord with the characteristics profile of entering participants.
* assists in making decisions about placement in competency areas.

Assessment for Monitoring Ongoing Competency Attainment

Used to track the competencies participants are attaining, and to adjust services so that they continue to be targeted on participants' competency needs.

Characteristics

* focuses on competencies at a detailed level.
* used by instructors/trainers to make decisions about the next activity needed.

Assessment for External Reporting

Used to make decisions about the readiness of a participant for a given job and to make credentialing decisions.

Characteristics

* must be clearly tied to relevant job tasks.
* used by employers or their representatives to determine whether a person is qualified for a job.
* must be well-developed in a technical sense since the consequences of the decision (whether to offer the person a job) are extremely serious.

X. Methods of Assessment

Competency indicators are measured through assessment methods. Planning for assessment should begin at the same time competency indicators and benchmarks are developed. If there is no way to measure a competency, then it should be discarded from the program.

You may wish to construct an assessment method designed specifically for your program. This approach, however, is time consuming and costly and usually requires the employment of consultants. As an alternative, a number of already existing assessment methods and instruments are available for use in your program which have the advantage of being less expensive then developing your own. But, care should be taken in selecting published instruments to ensure they have desirable characteristics.*

Basic Methods of Assessment in a Competency-Based System

Behavioral Observations

Behavioral observations in actual or simulated situations is a frequent form of assessment. This technique is particularly valuable if the competency relates to a "process" outcome such as "accepting supervision".

Product Review

In many cases, the participant must produce a product in order to demonstrate a skill, such as re-assembling a carburetor, or building a bookshelf. The product is rated for quality, using a pre-determined format developed in cooperation with employers.

Oral and Written Questions

Oral and written questions are best used for assessing acquired knowledge and the application of knowledge. The two basic types of oral and written question format are (1) open-ended questions in which the respondent creates an original answer and (2) multiple choice questions in which the respondent recognizes the correct answer from two or more alternatives.

*Multi-Dimensional Assessment Instruments as well as Publishers Addresses can be found in Appendix A and B.

XI. Selecting Appropriate Assessment Instruments

The effectiveness of an assessment strategy depends on the careful selection and/or development of instruments that will accurately measure the competencies identified. The three basic criteria that should be used in reviewing and selecting assessment instruments are as follows:

A. Validity is the most crucial factor for selecting an instrument. It refers to the extent to which the instrument measures the skills, knowledge, or attitudes the user intends it to measure.

B. Usefulness of an instrument refers to the extent to which the instrument can be used with the population served by your program and can be accurately understood by your program staff.

C. Reliability refers to the extent to which an instrument measures a trait consistently regardless of variations in the external assessment situations, such as changes in the staff using the instrument.

Questions to Ask

Validity	Usefulness	Reliability
1. Do the questions measure the specific competencies that need to be assessed?	1. Are the questions at a suitable language level for your program participant?	1. Is reported reliability for scores sufficiently high? (Consult technical manual accompanying the instrument)
2. Were the questions developed in a systematic and rigorous manner so that content is adequate and bias minimized?	2. Are instructions to the person administering the instrument clear and complete?	2. Are the scoring procedures clear and complete, thus ensuring reliable scores?
3. Were scientific procedures used to screen or select items to ensure that they were designed to measure? Are the questions understandable and free of ambiguous alternative answers and too complex language?	3. Does the instrument yield scores that are easily interpreted and appropriate for their intended use?	
4. Was the instrument validated using a group representative of the population with which the instrument is going to be used?		

XII. Focusing Program Services & Opportunities on Competency Attainment

Once competency statements, including indicators and benchmarks and an appropriate assessment methodology have been established, it is possible to move to the substance of a competency-based system. This consists of the services and activities that are provided in response to participants' needs vis-a-vis job requirements.

The services to be made available to youth should be related to assessment results and should be prescribed on the basis of individualized planning. Individualization is based on how a student learns as well as what is learned.

Individualized instruction recognizes individual differences in the way and rate at which students learn. On this basis, each student is allowed to work at a rate that is suited to his/her own learning style and level.

The learning environment is designed for flexibility and variety. Students are evaluated in terms of individual performance in reference to a performance standard (competency) and not by comparison with others.

Individualized Planning Elements

A. A procedure for recording the results of initial assessment of participants' competency levels.

B. A statement of goals and objectives toward which the participant is going to be working.

C. A "prescription" describing activities which will be undertaken to bring the participant to the desired goal or competency, taking into account the student's learning style and performance.

D. A description of the method by which the attainment of the goal or competency level will be measured.

E. A mix of instructional resources to allow accommodation to participants' differing perceptual strengths and learning styles, taking into account the fact that some individuals learn best through visual perception (reading or viewing), others through aural perception (listening), and still others through physical manipulation (doing things).

F. Flexible time variable required by students to acquire competencies.

G. A procedure for participants to evaluate their own performance.

XIII. Follow Up

Follow up is a study made of the experiences and status of students after completion of training or other kinds of termination. The purpose of follow up is to further assist former students in their progress and adjustment and to secure information that can be useful in improving the instruction or guidance of participants still in program. An important aspect of follow up is to determine whether training programs are meeting the needs of their clients as follows:

A. Provides an accurate picture of what happens to graduates

1. Are program graduates employed in jobs relevant to the training they have received?

2. Are youth who complete program and enter jobs able to meet the expectations of their employers and retain their jobs?

3. Among program graduates who are unable to find jobs or who are terminated after a short time, what competency deficiencies appear to account for their problems?

B. Allows for graduate input in planning for the improvement of programs

1. What skills are needed on the job for which training is not provided?

2. What employer attitudes, values or beliefs have the graduates experienced for which they have not been adequately prepared by the program?

3. What inconsistencies exist between the equipment and supplies used in the program and the equipment and supplies used on the job?

C. Provides a better understanding of student information and placement needs

1. What were the most difficult problems the graduates had in finding a job?

2. How can the program be improved to overcome information gaps and other insufficiencies?

D. Provides graduates' perception of program strengths and weaknesses

1. What kinds of training and opportunities should be emphasized in the program?

2. What training and other services have contributed little to the success of the graduates and might be eliminated?

XIV. Glossary

Competency Sheet: A record-keeping form to keep track of a student's competencies in a specific occupational area. It usually contains a listing of units of instruction and a rating scale for competencies, competency indicators and benchmarks under each instructional unit. Other terms used for competency sheets are competency profiles, skill records, employability profiles, training achievement records, and performance records.

Criterion-Referenced Tests: Assessment instruments which measure an individual's performance against a predetermined job standard. An example is a job sample test consisting of soldering an electrical circuit, similar to circuits found in electrical bench assembly work, within a specified time period.

Domains of Learning: Identifies the three areas in which learning and competency development occurs as follows:

- Affective domain - deals with attitudes, beliefs, feelings, values.
- Cognitive domain - deals with knowledge of facts, data, and related information necessary to perform a task.
- Psychomotor domain - deals with manipulative skills necessary for individuals to perform successfully on the job.

Individualized Instruction: Instruction which involves objectives, instructional materials, learning activities, and evaluation procedures that are based on the fact that students differ and do not learn at the same rate or in the same way. These differences create the necessity to provide a variety of activities and resources for students as they work toward performance objectives.

Learning Objective: A statement that indicates the behavior a student will demonstrate after successfully completing a learning experience. Other terms used for learning objectives are performance objectives, behavioral objectives, or instructional objectives.

Norm-Referenced Tests: Assessment instruments which are used to compare an individual's performance with the performance of a normative group (other individuals). Examples are standardized intelligence tests and reading tests.

Reliability: An indication of the amount of variation that is to be expected from an individual's repeated performance on an assessment instrument. Reliability thus, reflects the consistency with which an instrument measures an individual's aptitude, attitude or competency.

Validity: An indication of the degree to which a method or technique accomplishes what it is intended to accomplish. In competency-based training, validity indicates the degree to which the competencies developed by training increase the employability and employment of participants. In the area of assessment, validity indicates the degree to which an instrument measures the variable for which the instrument is intended.

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APPENDICES

Appendix A

A. Multi-Dimensional Assessment Instruments

1. PRE-EMPLOYMENT AND WORK MATURITY/BASIC EDUCATIONAL SKILLS/JOB SPECIFIC SKILLS.

Career Passport Program - The National Institute for Work and Learning's Career Passport Program is designed to fill a gap that many young people face when they consider entering the full-time labor market or continuing their education/training beyond high school. The Career Passport represents a formal document which is useful for job search and college applications because it documents the skills, abilities, and knowledge that have been gained through work and non-work experiences. The process of developing the Career Passport is a natural counseling tool which helps young people discover the strengths, weaknesses, and gaps in their experiences. The program also provides a framework for discussing such specifics as application procedures, interviews, and educational and career planning.

The Career Passport Program has been useful to both in-and-out-of-school youth. It helps them describe and document their work experiences, in-school activities, community and volunteer activities, hobbies, and home responsibilities; and then translate these into skills, competencies, knowledge, and interests.

A Career Passport Program consists of: a youth workbook to collect information on experiences, a leader's guide to assist adults in delivering the service to youth, a system of processing, storing, and updating the information and a format for the Career Passport. A typical Career Passport would include the following: background information, job experience, other experiences (hobbies, volunteer, community, school, family), education and training, skills, abilities and interests, education/career plans, and references. (National Institute for Work and Learning).

Career Planning Program - CPP is a guidance-oriented assessment program which collects, integrates, and reports information relevant to students' career planning. It assesses interests, experiences, and abilities and helps the student identify and explore personally relevant career options. The CPP Vocational Interest Profile measures knowledge of, or skill in: business contact, business detail, trades, technical, science, health arts, and social service. Six abilities are also assessed, including reading skills, numerical skills, language usage, mechanical reasoning, clerical skills, and space relations. (American College Testing Program).

Consolidated Youth Employment Program - The CYEP demonstration was structured to provide a developmental framework to parallel the maturation process of youth making the transition from school to work. Benchmarks of achievement were established locally to assess and document progress of participants towards the basic competencies required for successful employment. These four skill areas were: pre-employment, work maturity, educational, and occupational.

CYEP incorporated competency based assessment and service delivery systems to enhance the individualized acquisition of skills. The Job Corps Training Achievement Record was helpful in designing benchmarks for occupational skills. Standardized testing procedures were used by the primes operating the CYEP to varying degrees. (Osoro & Associates).

(Source: Brandeis University)

Experience Based Career Education Project of the National Institute of Education (EBCE) a) involves people and facilities in the community as a principal resource for student learning and program development and b) uses guidance and instructional activities to help students acquire competencies in dealing with the problems and decisions of adult life. This approach balances academic, personal, and vocational development with the subsequent requirement of career related activities for all students and emphasizes the development of general rather than job specific career skills.

In the initial EBCE Project conducted by NIE, the programs used standardized and specially developed tests to measure program effects on students in three basic areas: career development, reading and mathematics skills, and attitudes toward school and learning. Results on those tests were compared with those from randomly selected control groups at local high schools.

The Career Maturity Inventory was used to measure student career development. First and second year students showed significant growth on this measure. Program effects on student career interests were also measured by the Self Directed Search.

The Comprehensive Test of Basic Skills was the primary instrument being used to measure student reading and mathematics skills.

A number of different attitude measures were used by the projects to reveal effects of program activities on how students felt about themselves, about people they were working with, about school, about different career areas, and about learning in general. (National Institute of Education).

Interview Guide - This instrument provides an organized format and process for conducting comprehensive employability assessment interviews. (The Psychological Corporation).

Skill Center Advanced Training and Employment Program - The SCATE program is a national youth demonstration project, funded by the U.S. Department of Labor, to assist youth in preparing for and finding career employment. The project is designed to provide a complete spectrum of training and employment services through an individualized career development program for out of school youth ages 16 to 21, in Hampden County, Massachusetts who are experiencing the most severe barriers to employment.

Once youth are selected for the program, they receive a comprehensive assessment by vocational counselors and specialists, using a wide variety of survey instruments, assessment tools, and testing devices. These include the Singer Graflex, General Aptitude Test Battery, Test of Adult Basic Education, Work Sampling, Bennett Mechanical, General Clerical, and other specialized assessment devices.

Based upon these extensive assessments, as well as on a series of hands-on vocational exploration projects in various skills training areas, an individualized career development plan is prepared for each youth. This plan takes into account the particular needs and capabilities of each individual,

as well as the youth's level of performance and previously acquired competencies. The youth then progresses through a series of benchmarked activities based on an individualized training program.

The training program includes a benchmarking system which is used to document and certify competencies acquired by SCATE graduates, as they develop those skills necessary to compete successfully in the labor market. Four distinct benchmarks have been developed. These four bencmarks, and their associated program activities are:

(1) Basic Employability Skills - a two week preparatory phase designed to provide youth with information regarding career options, awareness of the world of work, and job search techniques.

(2) Work Maturity - a 10 to 20 week work experience activity, designed to develop in youth the ability to maintain continuity of employment, including regular attendance, punctuality, positive attitudes toward fellow employees and supervisor, and diligent work effort.

(3) Educational Competencies - an individualized educational remediation activity to provide youth with academic and communication skills, including GED completion, commensurate with career goals.

(4) Vocational Competencies - an intensive skills training program, up to 26 weeks in length, designed to provide youth with specific entry level skills for access to career employment.

Each of these competency areas has standards of performance, and progression through the program is determined by successful attainment of these benchmarks. (Hampden County Employment and Training Consortium).

Texas Adult Performance Level Project - This is a competency based system of education that combines the diagnosis, prescription, teaching, evaluation and credentialing of life-coping skills. A complete curriculum applies reading, writing, speaking-listening-viewing, computation, problem-solving, and interpersonal relations skills to the content areas of consumer economics, occupational knowledge, health, community resources, and government and law. For example, adults might learn how to read job descriptions or open savings accounts. The curriculum provides the activities and materials needed to teach toward each of the APL life-coping skills objectives. Printed materials are supplemented with filmstrips and cassette tapes. A pre/post diagnostic instrument for each objective is also included.

The APL competency-based high school diploma program offers adults a relevant alternative to the conventional four-year high school diploma and to the General Educational Development Test (GED). Adults can earn a regular high school diploma by demonstrating competencies gained through life skills-oriented adult education programs in combination with those gained through experience. The basic steps to the competency-based diploma are: a) placement tests, b) competency based curriculum, c) a series of life skills activities, and d) demonstration of a marketable entry-level job skill or post secondary education readiness or skills in home management/maintenance. (University of Texas at Austin - Continuing Education).

2. PRE-EMPLOYMENT AND WORK MATURITY/BASIC EDUCATIONAL SKILLS

California Adult Student Assessment System - This comprehensive educational assessment system is being developed to assist adult education programs in implementing competency based curricula in local instructional programs. The four major goals of CASAS are:

a) to provide effective assessment materials and procedures for correct placement of adult students into adult programs from beginning through advanced levels of ABE and ESL as well as high school completion programs,

b) to provide effective assessment for measuring student achievement in a competency-based adult education program,

c) to provide effective assessment for certifying attainment of competencies required for local certification programs, and

d) to provide effective assessment materials and procedures that are adaptable to a variety of educational settings and are linked to the competency-based curriculum goals and instructional programs.

These goals are being met through the cooperative activities of CASAS, which is a consortium of districts and agencies that provide educational services to adults. Such organizations need a comprehensive life skills assessment system in order to place adults at all levels of functioning in appropriate Competency Based Adult Education programs, and to measure their progress.

The Consortium model utilizes the resources and expertise of its members, and this cooperative effort provides a comprehensive adaptability. Implementation of competency-based programs require that assessment be designed to directly reflect the curriculum and instruction. Course outlines are being revised to include these competencies, and curriculum materials have been identified that provide a life skills content. The CASAS assessement design includes a bank of test items and facilitates the development of tests for specific purposes. Districts may choose test items to construct placement, achievement, and certification tests that match their programs and educational objectives. (California Adult Student Assessment System).

Job Interest and Literacy Level Evaluation Instrument - JILL contains two main parts. The first is a self-administered checklist which elicits perceptions of what the client wants to do, how he or she wants to do it, and how well the client thinks he or she can perform. The extent to which the client thinks he can perform is the measure of aptitude. The checklists for interest and aptitude, therefore, are subjective measures. The second is a test of literacy or basic skills, and includes nine questions. The first three correspond to sixth-grade level skills, the next three to eighth-grade level skills, and the last three to twelfth-grade level skills. Questions 1, 4, and 7 involve the use of reading skills. Questions 2, 5 and 8 involve the use of writing skills. Questions 3, 6 and 9 are computation items. The test ranges from easy to difficult. There is always the option of "I don't know" and clients are encouraged to check this response rather than guess. This instrument was designed for use with CETA clients. The JILL can be self administered or filled in by the counselor. It can be done in groups or

individually. A counselor can read the instrument to the client and record answers in about a half hour or less. A person with eighth grade reading skills can complete the two parts on his or her own in 15-30 minutes. (University of Texas at Austin).

Priority Counseling Survey - PCS was designed to identify educational and vocational counseling needs and priorities. The junior high forms deal with educational self-appraisal and help needed. The high school and junior college forms deal with areas such as career interest and skills and course of study and help needed. (Minicomp Corporation).

3. PRE-EMPLOYMENT AND WORK MATURITY/JOB SPECIFIC SKILLS

Beta - This instrument is a performance oriented intelligence test which is used along with the USES GATB. The revised BETA test includes six areas: a) ability to pay attention, to plan, and to use foresight, b) ability to perform repetitive tasks that involve new learning and short-term memory, c) abstract conceptualization skills, d) capacity to perceive spatial relationships, e) ability to differentiate essential from non-essential details, and f) visual discrimination tests that measure clerical skills, speed, and accuracy. (The Psychological Corporation).

Cleff Job Matching System - Cleff was designed to match jobs and job applicants at lower skill levels for both white and blue-collar occupations. This approach assumes that people seek out those work activities which they feel present the best prospects for success. CJMS developed a common language for describing the content and work environment of lower level jobs, and the characteristics, experiences and preferences of those seeking to fill those positions. The complex matching process determines which of the available openings best suits a particular applicant. (Center for Human Technology).

Comprehensive Occupational Assessment and Training System - COATS is intended for youth and adults in employment and training programs. It was basically designed for client (or student) self-interpretation followed by activities to change behavior. COATS contains four systems: a) job matching--matches person and preferences, experiences, and abilities to employment and/or training opportunities, b) employability attitudes—compares person's work values with employers' work values, c) work sample--contains 26 work samples (i.e., Masonry, Nutrition, Real Estate), and d) living skills—assesses literacy skills and knowledge. Each component can be used independently. (PREP, Inc.).

Experience Exploration - This is a career decision-making model based on evaluation of experience. It relates self-assessed experiences to the world of work and contains the following sections: a) an experience survey, b) experience in school subjects, c) perceived abilities, d) experiences with data-people-things, e) a work value inventory, and f) expected educational level. Interpretation reveals a series of job titles with DOT number. (Chronicle Guidance).

Geist Picture Interest Inventory - GPII reports 11 or 12 interest scores including persuasive, clerical, mechanical, musical, scientific, outdoor, literary, computational, artistic, soical service, dramatic, personal service (females only) and 7 motivational scores including family, prestige, financial, intrinsic and personality, environmental, past experience, could not say. It has male and female versions. (Western Psychological Services).

Hester Evaluation System - Hester's twenty-six separate performance and paper and pencil tests are used to measure 28 ability scores. Computer printouts report scores on each test, show level of functioning based on Data-People-Things hierarchy, and list specific DOT job titles sorted from most feasible to least feasible. (Evaluation Systems, Inc.).

Nurses Attitudes Survey - NAS is a multiple choice test for prospective nursing students. Scores are provided on attitudes related to nursing, self, home-family responsibility, others-love-marriage, and academics. (Nursing Research Associates).

Rating Scales for Vocational Values, Interests and Aptitudes - The purposes of VVIA are: to integrate a student's self-assessment of vocational values, interests, and aptitudes for several occupational areas, to determine the extent of interest in 20 areas applicable to career planning, to ascertain the degree of aptitude a person believes he or she possesses in each, and to discover the amount of value a person places on each of these classifications. (Educational and Industrial Testing Service).

San Francisco Vocational Competency Scale - SFVCS is designed to rate mentally retarded adults for participation in sheltered-workshops and other workshop programs. It covers four areas: motor skill, cognition, responsibility and social-emotional behavior. (The Psychological Corporation).

Vocational Interest, Temperament and Aptitude System - VITAS is composed of 21 work samples covering 15 worker trait group arrangements of the DOT, 3rd ed., and 16 work groups with four work areas in the DOT, 4th ed.. Interests are assessed through a structured interview and temperament is assessed through observation of clients performing the samples. VITAS provides a descriptive assessment of functional skills and quantitative scores for constructing IEPs, vocational placements, and training strategies. It is appropriate for the economically/educationally disadvantaged with less than a 12th grade education, as well as special needs high school students. The process requires 3 five hour days. Scores are reported on: nuts, bolts and washers assembly; packing matchbooks; tile sorting and weighing; collating material samples; verifying numbers; pressing linens; budget book assembly; nail and screw sorting; pipe assembly; filing by lettrs; lock assembly; circuit board inspection; calculating; message taking; bank teller; proofreading; payroll computation; census interviewing; spot welding; laboratory assistant; and drafting. (Vocational Research Institute--Jewish Employment and Vocational Service).

4. BASIC EDUCATIONAL SKILLS/JOB SPECIFIC SKILLS

Armed Services Vocational Aptitude Battery (Form 5) - Form 5 of the ASVAB was developed for civilian use by high school counselors and military recruiters. Its purposes are to: a) provide information useful in career guidance and vocational exploration, and b) furnish service represntatives with test score information on 11th and 12th grade students. Six composite scores are provided in verbal, math, perceptual speed, mechanical, trade technical, and academic ability. Total administration time is 180 minutes. (U.S. Military Enlistment Procesing Command, Fort Sheridan, Illinois).

Armed Services Vocational Aptitude Battery - Forms 8, 9, 10 - ASVAB is a multi-factor aptitude testing battery which is currently used as the lead assessment technique for qulaification for and assignments to duty following military enlistment. The current alternate forms of the ASVAB (Forms 8, 9, and 10) each consist of ten subtests: general science, word knowledge, arithmetic reasoning, paragraph comprehension, numerical operations, coding speed, auto/shop information, mathematics knowledge, mechanical comprehension, and electronics informaion. ASVAB requires about 180 minutes to complete. (Air Force Human Resources Laboratory).

CLEP Subject Examination in Computers and Data Processing - This test is appropriate for assessment of educational achievement, advanced placement, or college accreditation of nontraditional study. There are two parallel editions--90 and 45 minutes in length. (Educational Testing Service).

Differential Aptitude Tests/DAT Career Planning Program - DAT offers an integrated battery of aptitude tests, with scores, provided in verbal reasoning, numerical ability, abstract reasoning, clerical speed and accuracy, mechanical reasoning, space relations, spelling, and language usage. The target population encompasses grades 8-12. Total administration time is 235 minutes. (The Psychological Corporation).

Employee Aptitude Survey - Designed primarily for industrial use, this battery measures the following: verbal comprehension, numerical ability, visual pursuit, visual speed and accuracy, space visualizaton, numerical reasoning, verbal reasoning, word fluency, manual speed and accuracy, and symbolic reasoning. The test for each item is only 5 minutes in length. (Psychological Services, Inc.).

Industrial Reading Test - IRT was designed as a screening device with applicants or trainees for technical or vocational training programs. Representing an alternative approach to the measurement of reading skills, it is specifically constructed so that individuals for whom the test is intended will find the material directly relevant and meaningful. Some of the reading passages are representative of sections encountered in technical manuals, while others are written in the form of a company memorandum. Good performance on the test is not dependent on previous knowledge of the subject. Appropriate for 9th-12th grades and adults, IRT takes 40 minutes to complete. (The Psychological Corporation).

USES Non Reading Aptitude Test Battery - The NATB was designed by the United States Employment Service as an alternative to the General Aptitude Test Battery to test the occupational aptitudes of persons who do poorly on standard tests because of a lack of reading skills. Instructions and quesions are read aloud by test administrators so clients need not be able to read at all. Both the NATB and GATB provide scores for the following aptitudes: (G) general learning ability, (V) verbal aptitude, (N) numerical aptitude, (S) spatial aptitude, (P) form perception, (Q) clerical perception, (K) motor coordination, (F) finger dexterity, and (M) manual dexterity. NATB measures the first six aptitudes through materials and situations most familiar to the disadvantaged. Use of coins, tools and pictures are illustrative of this approach. The last three aptitudes are determined by the same tests in both batteries, since these do not require any reading. Total administration time required is 107 minutes. (U.S. Government Printing Office).

Wechsler Adult Intelligence Scale - WAIS encompasses two scales--Verbal and Performance--and provides scores on the following items: information, comprehension, arithmetic, similarities, digit span, vocabulary, digit symbol, picture completion, block design, picture arrangement, and objects assembly. Both speed and accuracy of performance are taken into account in scoring. (The Psychological Corporation).

Wonderlic Personnel Test - WPT is a 12 minute test of general learning ability, including numerical, verbal and spatial aptitudes. It has been widely used in screening applicants for jobs at various levels, especially in private industry. (E.F. Wonderlic & Associates, Inc.).

B. Pre Employment & Work Maturity Assessment Instruments

Assessment of Career Development - ACD was designed for use with 8th through 11th grade students as a career guidance development tool. Its purpose is to obtain information needed in formulating effective programs tailored to student needs. The instrument's scales measure occupational awareness (knowledge, exploratory experiences), self awareness (job values and preferences, career plans, self evaluation, perceived needs), and career decision making (career planning knowledge, involvement in career planning experiences). ACD can be administered in 125 minutes. (American College Testing Program).

California Life Goals Evaluation Schedules - CLGES is an inventory based on ten career areas: esteem, profit, fame, power, leadership, security, social service, interesting experiences, self-expression, and independence. It is suitable for persons ages 15 and over (Western Psychological Services).

Career and Occupational Development Exercises - COD measures students' attainment of career and occupational objectives related to: a) preparing for making career decisions, b) improving career and occupational skills, c) possessing skills that are generally useful in the world of work, d) practicing effective work habits, and e) having positive attitudes toward work. (National Assessment of Educational Progress).

Career Awareness Inventory - CAI measures the awareness of a variety of careers. It is designed around the functions, contents, status, requirements, lifestyle and experiences typical of twelve occupational clusters. Total administration time is 60-90 minutes. (Scholastic Testing Service, Inc.).

Career Awareness Skills - CAS shows how much a student knows about the following aspects of education, work, and leisure opportunities and how well he/she can use the information: a) relating abilities, values, needs and experiences to career choices, b) locating, evaluating, and interpreting information for career choices, c) knowing facts about career opportunities, and d) finding out about educational requirements for occupations. It takes about 60 minutes to complete. (The College Board).

Career Decision-Making Skills - CDMS reveals skills, knowledge and techniques of a student necessary for informed career decision-making: a) define a problem, b) establish an action plan, c) clarify values, d) identify alternatives, e) discover probable outcomes, f) eliminate alternatives systematically, and g) start action. It takes about 60 minutes to complete. (The College Board).

Career Development Inventory - CDI assesses attitudes, knowledge and skills related to career development, vocational maturity, and readiness to make pre-occupational and vocational decisions. Scores are provided on career planning and exploration, decision-making, world of work information, and understanding of preferred occupational group scales. Total administration time is 60-85 minutes. (Consulting Psychologists Press, Inc.).

Career Education Affective Assessment Questionnaire - This instrument assesses students' feelings about a wide range of concepts related to the world of work. It is designed to be administered to a class in 30-45 minutes. (Minnesota Research Coordinating Unit for Vocational Education - University of Minnesota).

Career Education Career Concepts Test - This instrument determines students' knowledge of career concepts. It has fifty multiple choice items, with no time limit. (Ontario-Montclair School District).

Career Education Cognitive Questionnaire - This instrument assesses students' knowledge about a wide range of concepts related to the world of work. The following areas are included: a) industry, b) occupational levels, c) ability requirements, d) needs (and/or job satisfaction), e) working conditions (or characteristics), f) career decision process and g) employment trends. It takes 30-45 minutes to complete. (Minnesota Research Coordinating Unit for Vocational Education - University of Minnesota).

Career Education Readiness Test - CERT measures student attitudes and knowledge regarding: a) sex role stereotyping, b) intrinsic and extrinsic reasons for working, c) occupational esteem, d) awareness of vocational concepts, e) occupational responsibilities, and f) world of work vocabulary. (Career Education Readiness Measurement and Research)

Career Guidance Assessment - CGA determines knowledge of career awareness, concepts of self in relation to the work world, and constructive use of these understandings as applied to the process of career choice. (Connecticut State Board of Education).

Career Information - CI assesses mastery of knowledge pertaining to career information, occupational supply and demand, job characteristics, and individual needs and interests as they all relate to career choice. (TEXAS Education Agency).

Career Maturity Inventory - CMI measures attitudes and competencies relating to career choice for individuals at the 6th to 12th grade levels. Scores are provided in the areas of self appraisal, occupational information, goal selection, planning and problem solving. Test time is approximately 160 minutes. (CTB/McGraw-Hill).

Career Orientation Battery, Form 58 - COB assesses students' knowledge of and attitudes toward objectives related to technology, self-esteem, attitudes toward school, attitudes toward work, decision-making skills, and the world of work. (New Educational Directions, Inc.).

Career Skills Assessment Program - CSAP determines competencies in the following career development skill areas: self-evaluation and development, career awareness, career decision making, job-seeking, work effectiveness, and personal financial management. The self evaluation and development skills measure assesses self-knowledge in the area of career planning, with an emphasis on personal values, interests, strengths, and weaknesses. The career awareness skills measure assesses knowledge about opportunities in work, education, and leisure. The work effectiveness skills measure is concerned

with problems of interpersonal relations, value conflicts, supervision, work habits, and work attitudes on the job. The remaining measures, career decision making skills, employment seeking skills, and personal economics skills are self-explanatory. Intended populations for use of the measures include high school students and adults in continuing education settings such as community colleges, vocational institutes, and some four year colleges. Each measure consists of sixty to seventy multiple-choice questions and is designed to be administered in 45-60 minutes. (The College Board).

Colorado Battery - This series of tests was developed for use in work with the seriously disadvantaged. The Social Access Questionnaire contains 89 items measuring six personality factors. It also contains questions about personal history. This test was designed to tap social and personality characteristics that contribute to "job deviance." Subjects fill out the measure either individually or in large groups. The Work Requirements Rating Scale is a 47-item questionnaire dealing with behavior on the job and is designed to measure the consequences of differing vocational attitudes among worker, supervisor and employer. The Importance Questionnaire is a test of 20 items relating to job conditions or opportunities, each rated on a scale of from very important to very unimportant. The Employment Satisfaction Questionnaire has 20 items measuring job satisfaction on a scale from very unsatisfied to very satisfied. The Job Conditions Questionnaire is an 8-page questionnaire concerning perceived work environment. The Job Expectancy Rating is a single-page rating for for evaluation by workers of six basic job conditions. The Job Importance Prediction Scale is a 12-item scale filled out by workers and supervisors to check for congruencies and discrepancies between the two groups regarding important job conditions. (Colorado State University).

Employee Competency Scale - ECS provides supervisory ratings for employees on the following scales: communication, dependability, attitude, job competence, and leadership. This instrument takes 10-20 minutes to complete. (Psychologists and Educators Press)

Employment Readiness Scale - ERS was designed to measure a person's readiness for work by assessing work values. It is especially applicable for high school students going to work upon graduation in an unskilled, semi-skilled or skilled employment setting. (Anthony M. Alfano).

Employment Seeking Skills - ESE assesses skill and knowledge in the following aspects of seeking employment: a) anticipating job prospects, b) finding and interpreting facts and sources of information about available jobs, c) identifying appropriately written letters, resumes, and application forms, d) describing appropriate appearance and behavior as one is interviewed and evaluated for a job, and e) evaluating when a specific job fits a person's needs and interests. It takes about 40 minutes to complete. (The College Board).

Goodwin Work Orientation Questionnaire - The WOQ was developed to measure attitudes, goals, beliefs, and intentions regarding the world of work. The instrument consists of several sets of questions about work that are rated on a scale of responses from "agree" to "disagree." (The Brooking's Institution).

How I See Myself, Secondary Form - This instrument measures self esteem for individuals at the 9th-12th grade levels, and takes about 20-30 minutes to complete. (School of Education--UNC, Chapel Hill).

Indik Work Motivation Scales - This is an interview format test designed to estimate work motivation. The interviewer reads a collection of statements and asks the interviewee whether he/she agrees strongly, agrees mildly, is undecided, disagrees mildly, or disagrees strongly. Also, data are collected by having the interviewee choose one of four possible endings to unfinished statements read by the interviewer. Six areas of motivation are assessed: the motive to work, the motive to avoid work, the expectancy to work, the expectancy to avoid work, the incentive to work and the incentive to avoid work. (Rutgers University).

Job Analysis and Interest Measurement - This instrument measures coping skills important to performance and satisfaction in work roles. It was designed to measure factors such as "getting along" (coping) by determining the degree of match between requirements and potentials of jobs and the individual's self reported behavior, activity preference, and values. JAIM provides scores for 32 specific scales including self-confidence, orderliness, perseverance, assertiveness, dependability, and emotional control. Completion time is 30-40 minutes. (JAIM Research, Inc.).

Job Acquisition and Retention - JAR measures mastery of objectives pertaining to job location and interview skills, as well as knowledge and understanding of job retention skills. (TEXAS Education Agency).

Job Corps Revised World of Work Program - The World of Work Program is an individualized, competency-based, open entry-open exit effort to provide Corps members with job search, employability and adult survival skills, occupational knowledge, and consumer economies. Students are pretested for mastery in each major skill area and assigned to study only the areas that they have not mastered. A study plan is developed for every individual. In each area of assigned study, students are required to master specific objectives in order to advance and complete the program. Additionally, each youth develops a set of applied skills (resume, sample application forms, interview techniques) which provide real evidence of his/her mastery. (Job Corps).

Jorganson Interpersonal Relationship Scales - JIRS contains two instruments designed for a research study of the relationship between interpersonal facility and placement success. The Social Vocabulary Index consists of six scales: a) the self-concept scale, a 20-item test of opinions of self consisting of statements beginning with "I am..."; responses are chosen from frequency alternatives (most of the time--hardly ever), b) the self-acceptance scale, a 20-item adjective check list, c) the ideal self scale, with the same items as the self-concept scale, except that the statements are stemmed "I would like to be...", d) concept of other scale, also having the same items, but stemmed "Other people are...", e) a vocabulary scale, designed to measure subjects' reading comprehension, and f) a social desirability scale, consisting of 33 statements about personal behavior which the subject is asked to rate true or false for himself.

The Revised Interaction Scale, the other instrument used in this study, is a two-part paper-and-pencil questionnaire that is used by both counselor and counselee to rate the counseling interaction. (University of Utah).

Knowledge of Occupations Test - KOT was designed to measure the extent to which high school students have occupational knowledge. This includes information regarding job descriptions, training, certification and licensing, employment trends, tools, terminology, and earnings, as well as the ability to interpret occupational material. The test contains 96 questions grouped into these eight categories, and takes 40 minutes to complete. (Psychologists and Educators, Inc.).

Mandell NYC Program Interview Forms - These intruments were designed to gather data about job perceptions of Neighborhood Youth Corps enrollees. (Wakoff Research Center).

Minnesota Importance Questionnaire - The MIQ measures psychological needs and values found relevant to work satisfaction. The 20 needs scales include security, compensation, achievement, recognition, authority, creativity and activity, while values scales encompass such items as altruism, autonomy, comfort, safety and status. It is appropriate for individuals age 16 and above. (Vocational Psychology Research).

Missouri Occupational Preference Inventory - MOPI assists clients in exploring career options and understanding reasons behind occupational choices. It is suitable for a wide client population, including college and high school students and employment/training program participants. Total administration time is two hours. (Human Systems Consultants, Inc.).

Mooney Problem Check List - Designed chiefly to identify problems for group discussion or for individual counseling, this checklist drew its items from written statements of problems submitted by about 4,000 high school students. The checklist is available in junior high, high school, college, and adult forms. The problem areas covered vary somewhat from level to level. In the high school and college forms, they include health and physical development; finances, living conditions, and employment; social and recreational activities; social-psychological relations; personal-psychological relations; courtship, sex, and marriage; home and family; morals and religion; adjustment to school work; the future--vocational and educational; and curriculum and teaching procedure. Although the number of items checked in each area can be recorded, the Mooney Problem Check List does not yield trait scores or measures of degree of adjustment. Emphasis is on individual items as self-perceived and self-reported problems or sources of difficulty. (The Psychological Corporation).

My Vocational Situation - This tool provides information about an individual's vocational identity (does the individual have a clear idea of his/her goals, interests, personality and talents?), occupational information (does that person need more information?), and barriers (what external barriers exist that may keep an individual from pursuing his/her particular career choice?). (Consulting Psychologists Press, Inc.).

National Assessment of Educational Progress--Career and Occupational Development Exercises - NAEP developed these exercises to survey the educational attainment of 9, 13, and 17 year-old youth in the areas of career and occupational development. They are objective based episodes and assess career decision making, vocational abilities, skills useful in the world of work, effective work habits, and job related attitudes. (National Assessment of Educational Progress).

New Mexico Career Education Test Series - NMCETS was developed to assess specific learner objectives in the area of career education. It contains the following components: Attitude Toward Work, Career Planning Test, Career Oriented Activities Checklist, Knowledge of Occupations, Job Application Procedures, and Career Development Test (Monitor).

New Mexico Statewide Evaluation Program - This instrument provides data concerning knowledge of the following: a) career planning and decision-making, b) the role that job characteristics and requirements play in the selection of a career, c) applying for a job, and the needed skills and behaviors, and d) basic attitudes, values and responsibilities necessary to maintain a job and advance beyond the entry level of an occupation. (Evaluation, Assessment, and Testing Unit--New Mexico State Department of Education).

Non-Sexist Vocational Card Sort - NSVCS focuses on the exploration of feelings, values, needs, interests, fears, fantasies, life style preferences and the internalized sex, race or class stereotypes which limit the vocational options clients perceive to be open to them. It can be used for high school level clients and takes two hours to administer. (NSVCS).

Occupational Awareness Inventory - OAI was designed to determine an individual's awareness of careers through testing his/her career information knowledge. It is a multiple choice instrument appropriate for junior high level students who have been exposed to a career awareness program. (Evaluative Research Associates, Inc.).

Occupations and Careers Information BOXSCORE - BOXSCORE assesses basic knowledge of occupational information. The questions included in the test involve the following kinds of information: work performed, entry requirements (schooling), licensing requirements, rewards (earnings), and occupational outlook, as well as general information on the world of work. (Chronicle Guidance Publications, Inc.).

Occ-U-Sort - This process was developed to: a) stimulate career exploration, b) facilitate occupational decision-making, c) promote individual thinking about motives for choosing occupations, d) sharpen self-perceptions in the context of meeting career needs, e) broaden career options, and f) provide a framework for understanding the wider world of work. It is appropriate for junior and senior high school students, college students, and adults, and requires approximately one hour to administer. (Publisners Test Service).

Ohio Work Values Inventory - OWVI consists of 77 items that measure eleven significant work values. They include altruism, object orientation, security, control, self-realization, independence, money, task satisfaction, solitude, ideas/data orientation, and prestige. (CTB/McGraw-Hill).

Orientation to Career Concepts Series - OCCS assesses what students know about 10 important aspects of the world of work: a) work awareness, b) worker activities, c) vocational vocabulary, d) occupational incongruities, e) occupational similarities, f) occupational tools, g) ability to relate an individual's interests, abilities, and hobbies to possible occupations, h) working conditions, i) occupational training, and j) worker's earnings. The entire battery requires about three hours to complete. (Evaluative Research Associates).

Personal Reaction Blank - PRB assists personnel officers in selecting new employees. It employs 70 interest and attitude items and yields a single score designed to measure a dependability-consciousness factor among rank and file workers. The instrument normally takes 10-15 minutes to complete. (University of California at Berkeley).

Program for Assessing Youth Employment Skills - PAYES contains a battery of seven tests designed specifically for use with disadvantaged youth. It consists of three separate booklets. Booklet 1 contains three attitudinal measures; Booklet 2, three cognitive ones; and Booklet 3, a vocational interest inventory. Job-holding skills, attitude toward supervision and self-confidence are the three major attitude areas covered. Cognitive measures of job knowledge, job-seeking skills and practical reasoning also are surveyed. The measures are designed for adolescents and young adults with low verbal skills; pictures help to clarify many of the questions presented. The pictures in this "unisex" test battery are designed so that all items are equally appropriate for males and females.

PAYES is administered orally to small groups in an informal manner. (Cambridge Book Company).

Self-Directed Interest Inventory - The purpose of SDII is to obtain information regarding students' activities, occupations, and abilities as they relate to career interests. The five sections of the inventory consist of a) listing the occupations they have considered, b) indicating the activities they like or dislike, c) evaluating the competencies they possess in performing different activities, d) rating occupations they find interesting or not interesting, and e) making self-estimates of their own abilities in different areas. Total time required is approximately 30 minutes. (Research for Better Schools, Inc.).

Self Evaluation and Development Skills - SEDS reveals skill and knowledge in the following aspects of self-understanding, and the extent of awareness of the characteristics and behavior of other people: a) understanding individual differences, b) evaluating individual characteristics and understanding test results, c) changing personal characteristics and behavior, d) locating and interpreting information about self, and e) applying knowledge about self to career opportunities. It takes 60 minutes to complete. (The College Board).

Self Interview Check List - This vocational interest instrument is used with the Cleff Job Matching System. It produces two applicant profiles: one describes activities preference, and the other describes activities experience, arranged according to 16 dimensions of work. Results can then be compared with data on

the characteristics of the jobs, organized under the same basic dimensions. (Center for Human Technology).

Standardized Assessment System - The SAS was developed to test the relative effectiveness of a wide variety of youth employment and training programs. The SAS pre and post program battery measures specific work related competencies on the following scales: vocational attitude, job knowledge, job holding skills, work relevant attitudes, job seeking skills, sex stereotyping of adult occupations, and self esteem. The Standardized Assessment System also includes the STEP Locator Reading Test, and rating forms on enrollee behavior to be filled out by counselors, work supervisors, and employers. (Educational Testing Service).

STS Youth Inventory - This instrument is a checklist of needs and problems and is suitable for individuals at the 7th-12th grade levels. Items are grouped under the following catagories: "My School," "After High School," "About Myself," "Getting Along With Others," and "Things in General." A helpful device incorporated into STSYI is the use of different sized response boxes to enable the respondent to suggest the magnitude of each problem. (Scholastic Testing Service, Inc.).

Survey, Secondary School Form - This instrument measures knowledge of occupations and educational career relationships, as well as self concept and personal values. (Union County Board of Education--Career Based Curriculum Project).

Tests for Everyday Living - TELs measure knowledge of life skills necessary to successfully perform everyday life tasks, such as shopping, using bank accounts, managing one's personal finances, obtaining and keeping a job, and maintaining one's health. The seven tests are: job search skills, job related behavior, health care, home management, purchasing habits, banking, and budget. (CTB/McGraw-Hill).

Texas Career Education Measurement Series - TCEMS consists of a battery of sixty-three paper-and-pencil instruments and a general survey test. The sixty-three Basic Learner Outcome Tests are designed to measure student development within nine career education categories. These categories are career planning and decision making, career and occupational information, job acquisition and retention, attitudes and appreciation for career success, skills in human relationships for careers, self investigation and evaluation for career success, personal/work/societal responsibilities, economic factors influencing career opportunity, and education/career opportunity relationships. (I(t) Work(s), Inc.).

TSENG Rating Scales - These short scales were developed for measuring self perception, locus of control, and need for achievement. They were utilized in these related studies designed to investigate relationships between work related characteristics and personality traits. (West Virginia University).

USES Interest Checklist - This interviewing aid is used to obtain information on the range of vocational preferences. It is particularly useful with persons who have no definite work interests or who have limited knowledge of the variety of jobs and occupational fields. The checklist enumerates 173 items that have been keyed to the Worker Trait Arrangement (WTA) and Occupational

Group Arrangement (OGA) of the third edition of the Dictionary of Occupational Titles. (U.S. Government Printing Office).

Vocational Exploration Demonstration Project - VEDP provided an educational and motivational experience through which program participants could: a) learn about the world of work and the labor market, b) become aware of and acquainted with different occupations, jobs and career opportunities, c) gain the knowledge and perspective to help them make decisions about their future, and d) develop a firm behavioral and attitudinal foundation from which to proceed into the realm of employment. The VEDP Year II Benchmark Assessment System was designed to document youth acquisition of entry level competencies in the pre-employment and work maturity areas. The BAS was curriculum referenced and learning objectives based, and encompassed behavioral observation, product review, and experiential episodes as evaluation procedures. (St. Louis University Center for Urban Programs).

Vocational Interest, Experience, and Skill Assessment - VIESA is a self scored inventory of career related interests, experiences, and skills supplemented by an informal ranking of job values. It facilitates self/career exploration on the part of persons in the early stages of educational and vocational planning or replanning. There are two levels: grades 8-10 and grades 11-Adult. VIESA, designed to widen the range of careers usually considered by males and females, can be administered in 45 minutes. (American College Testing Program).

Vocational Planning Inventory - VPI provides individual predictions of success in major vocational curriculum areas by measuring a student's general ability, specific aptitudes, achievement, and values. The resulting test score data are transformed into estimates of the average grades a student would most probably receive in courses in specific vocational curriculum areas as well as in vocational and academic subjects as a whole. BPI consists of separate subtests of: pictorial reasoning, expression, assembly, memory, arithmetic, values, general ability, and mechanics. It requires approximately 3 hours to complete. (Science Research Associates, Inc.)

Work Effectiveness Skills - WES indicates skill and knowledge in the following aspects of working on a job: (a) identifying the responsibilities of employers and employees to each other, (b) developing effective work habits, (c) achieving effective working relationships with co-workers, (d) managing work situations to achieve personal satisfaction, (e) giving and receiving supervision effectively, (f) advancing on the job, and (g) planning job changes. It takes about 60 minutes to complete. (The College Board.).

Work Relevant Attitudes Inventory - WRAI consists of 26 items arranged into three scales: optimism, self confidence, and unsocialized attitudes. It can be used to help diagnose the needs of new program participants. (George Washington University.).

Work Values Inventory - WVI is a self report inventory designed to measure the satisfactions which men and women seek in work, and the satisfactions which may accompany the outcomes of work. Scales include altruism, creativity, aesthetics, intellectual stimulation, independence, achievement, prestige, management, economic returns, security, surroundings, supervisory relations associates, variety, and way of life. Total administration time is 15-25 minutes. (The Riverside Publishing Company - a Houghton Mifflin Subsidiary).

C. Basic Educational Skills Assessment Instruments

Adult Basic Learning Examination - ABLE is a four-part test battery designed to measure educational achievement among adults, primarily those who have not completed formal 12th-grade education. There are three levels of the ABLE. At each level there are tests of vocabulary, reading, spelling, and arithmetic (problem solving and computation). The ABLE Reading Test contains a great variety of content, with heavy emphasis on the everyday life of adults, and is designed to yield a general estimate of literacy. A separate test, called SelectABLE, may be used to determine which level of ABLE is appropriate for a given examinee. Administration of ABLE is not timed, but the Reading test probably would require about 30 minutes to complete for most examinees. (The Psychological Corporation).

Adult Performance Level Program - APL is an objectives based assessment program designed to measure the life skills proficiency of both young and mature adults. Rather than emphasizing purely academic knowledge, the Program focuses on basic tasks that are highly relevant to everyday living. The basis of the APL Program is a two-dimensional model of functional competency that emphasizes the application of fundamental skills to practical situations. The skill dimension of the program includes identification of facts and terms, reading, writing, computation, and problem-solving—all considered important for successful living in our society. The practical situations or content dimensions of the program have been organized into five major areas. These are community resources, occupational knowledge, consumer economics, health, and government and law. These content areas include most of the situations judged to be critical in the daily life of successful adults. (American College Testing Program).

Analysis of Learning Potential - This instrument measures learning potential, and provides two scores—one based on comparisons with examinee's own age group and another based on comparisons with examinee's grade group. It also offers reading and mathematics composite prognostic scores. (Harcourt Brace Jovanovich).

Analysis of Skills: Language Arts - ASLA is an objective-referenced and norm-referenced test measuring skills in capitalization and punctuation, usage, and sentence knowledge/composing process. Each of 36-58 skills are tested by three items, and the results are given as mastery, partial mastery and non-mastery of each skill. The test is available in six levels. Appropriate administration times vary from 60 to 90 minutes. (Scholastic Testing Service, Inc.).

Analysis of Skills: Mathematics - ASM is an objective-referenced and norm-referenced test measuring skills in the following areas: computational skills, concepts, and applications. Skill scores are provided for positive whole numbers, fractions, and decimals, negative integers, computational processes, numbers and numeration systems, properties, and theory, set notation and operation, common measures, metric and nonmetric geometry, percents, statistics and probability, trigonometry, functions and graphs, ratios and proportions, mathematical sentences and algebra, everyday problems, and use of specific concepts. Each skill is tested by three items, and the results are given as mastery, partial mastery, and nonmastery of each skill. Approximate administration times vary from 100-180 minutes, divided among three testing sessions. (Scholastic Testing Service, Inc.).

Analysis of Skills: Reading - ASR is a criterion and norm referenced test measuring skills in the following areas: word analysis, comprehension, and study skills. Test completion time is 135-175 minutes. (Scholastic Testing Service).

Assessment of Skills in Computation - ASC measures junior high school students' ability to handle computational problems typically encountered in school, home, and community situations. The ASC program provides diagnosis of skill strengths and needs and instructional prescriptions to remediation in each area of need. It prepares students for successful performance on competency-based tests for graduation from senior high school. (CTb/McGraw-Hill).

Basic Skills in Arithmetic Test - BSAT assesses an individual's ability to perform forty-three fundamental skills in arithmetical operations involving whole numbers, fractions, decimals, and percentages. Test results can be used in determining group and individual instructional needs. In industrial settings, the results can be used to aid in the selection and placement of personnel in positions which require basic computational skills. (Science Research Associates, Inc.).

California Achievement Tests - CAT measures educational attainment and diagnoses learning difficulties in basic skills. It provides scores in reading (vocabulary and comprehension), arithmetic (reasoning and fundamentals), and language (mechanics and spelling). (CTB/McGraw-Hill).

Comprehensive English Language Test for Speakers of English as a Second Language CELT is a measure of the English proficiency of persons high school age and above who are learning English as a second language. The listening test is concerned with the comprehension of short statements, questions, and dialogues as spoken by native speakers of English, it is designed for use in programs of English as a second language at the intermediate and advanced levels. (McGraw-Hill Book Company).

Cooperative English Tests - These tests measure achievement in two fundamental areas: reading comprehension and english expression. Reading comprehension is further broken down into vocabulary and reading (level of comprehension and speed of comprehension). English expression also consists of two parts (effectiveness and mechanics). There are three parallel forms of each test. Testing time is 40 minutes per test. (Educational Testing Service).

Comprehensive Tests of Basic Skills - These instruments were designed to measure the basic skills involved in the broad areas of reading (vocabulary, comprehension), language (mechanics, expression, spelling), mathematics (compulation, concepts, applications), reference skills, science, and social studies. The time required to administer the entire battery is 184-268 minutes, depending on the level. (CTB/McGraw-Hill).

Cornell Learning and Study Skills Inventory - This instrument aids in the assessment of factors which are related to learning problems and school performance. The inventory can be used with a sixth grade or higher reading level. (Psychologists and Educators, Inc.).

Diagnostic Mathematics Inventory - DMI can be utilized to a) diagnose strengths and needs in mathematics, b) prescribe relevant learning experiences in mathematics skills, and c) evaluate attainment of specific mathematics objectives after a period of instruction. (CTB/McGraw-Hill).

Diagnostic Reading Scales - DRS's consist of an individually administered series of graduated tests containing three word-recognition lists, 22 reading passages, and eight supplementary phonics tests. The graded word-recognition lists yield a tentative level of performance that is used to determine the examinee's entry level to the reading passages. The reading passages are used to establish three reading levels for the examinee: instructional level (oral reading), independent level (silent reading), and potential level (auditory comprehension). (CTB/McGraw-Hill).

Diagnostic Reading Tests - DRT's comprise three separate batteries designed to cover all grade levels from kindergarten through the freshman year of college. The basic plan of each battery includes a survey section designed to assess general reading proficiency and a number of supplementary diagnostic tests for appraising specific reading skills. The entire battery need not be given to each individual. Teachers may choose tests in those areas in which the individual exhibits special difficulties, as indicated by his performance on the survey tests. (Committee on Diagnostic Reading Tests, Inc.).

Everyday Skills Tests - EDSTs are survival skills tests for junior high schools that measure the skills in reading and mathematics necessary for effective participation in today's complex society. They provide, in a single instrument, criterion-referenced measures of basic competencies as well as norm-referenced data for monitoring achievement in relation to a national sampling of the student population. (CTB/McGraw-Hill).

Fundamental Achievement Series - Designed as an achievement test for people with below average exposure to formal education, FAS is administered by tape-recording and test booklets to adolescents and adults with an ability range from basic literacy to somewhat above the eighth grade. The verbal and numerical sections measure practical achievements, such as reading signs and menus, finding numbers or names in a list, recognizing numbers and correctly spelled words, telling time, using calendars, understanding orally presented information, and solving computational problems of varying difficulty. (The Psychological Corporation).

General Educational Performance Index - GEPI was devised to measure the extent to which adults are ready to attempt the General Educational Development test. The five subtests include writing, reading, mathematics, social studies, and science. Administration time is approximately three hours. Test scores may be useful for grouping for instructional purposes or following progress in test-retest situations. (Steck-Vaughn Company).

Gilliland Learning Potential Examination - GLPE is a measure of intelligence designed specifically for individuals who are either non readers or poor readers, and native and rural Americans. Scores reported include visual memory, symbolic representation, symbol identification, relationships, listening comprehension, picture completion, and general information. (The Reading Clinic--Eastern Montana College).

High School Equivalency Test Guide - This instrument is a test primer for the GED, similar in some aspects to the General Education Performance Index. Subscores are available in the following areas: correctness and effectiveness of expression (spelling, capitalization, punctuation, usage, effectiveness of expression, diction and style), interpretation of reading materials in literature, social studies and general science, and general mathematical ability. (P.A.R., Inc.).

Individual Reading Placement Inventory - IRPI is an individually administered aid in determining the student's independent reading level, frustration level, and present language potential. The Inventory is designed specifically for illiterate and semiliterate adolescents and adults. Subscores are word recognition and analysis, oral paragraph reading, present language potential, auditory discrimination, and letters of the alphabet. After administering the Inventory, the examiner completes the Checklist of Reading Difficulties, a form for recording observations concerning possible posture problems, emotional symptoms, reading rate difficulties, and sight-sound perceptual problems. (Follett Educational Corporation).

Individualized Criterion Referenced Testing: Math - ICRTM consists of eight levels of tests measuring 312 objectives in the following areas: sets, bases/numeration systems, addition and subtraction/whole numbers, place value, equations and inequalities, properties of addition and subtraction, money, time, geometry, fractions, measurement, word problems, multiplication of whole numbers, division of whole numbers, properties of multiplication and division, multiples/prime and compositon, factorization, estimation and rounding, graphs and scale drawings, decimals and percents, exponential notation, ratio and proportion, and operations of rational numbers/integers. (Educational Development Corporation).

Individualized Criterion Referenced Testing: Reading - ICRTR's objectives include letter recognition, phonetic analysis, structured analysis, literal and critical comprehension, and vocabulary. (Educational Development Corporation).

Iowa Tests of Basic Skills - ITBS provides scores on the following scales: vocabulary, reading comprehension, language (spelling, capitalization, punctuation usage), work study skills (graphs, reference materials, tables, maps), and arithmetic skills (concepts, problem solving). Time required for completion is a little over six hours. (Houghton Mifflin).

Iowa Silent Reading Tests - The test appraises vocabulary, reading comprehension, and speed of reading with comprehension. Level 1 (grades 6-9) and Level 2 (grades 9-14) also assess use of reference materials and skimming/scanning for specific information. ISRT provides a reading efficiency index which measures reading speed and accuracy. Testing time is 80 minutes. (Harcourt Brace Jovanovich).

Iowa Tests of Educational Development - ITED measures broad and generalized intellectual skills and abilities. The following items are assessed: understanding of basic social concepts, background in the natural sciences, correctness and appropriateness of expression, ability to think quantitatively, ability to interpret reading materials in social sciences,

ability to interpret reading materials in natural sciences, ability to interpret literary materials, general vocabulary, and uses of sources of information. Completion time is two days. (Science Research Associates, Inc.).

IOX Basic Skill Tests - There are three Basic Skills Tests, one each in reading, writing and mathematics. In each of these tests, distinct skills are measured by separate subtests--five in reading (understanding safety warnings, completing forms and applications, using common reference sources, determining main ideas, using documents to take action), four in writing (using words correctly, checking mechanics, selecting correct sentences, expressing ideas in writing), and four in mathematics (performing basic calculations, solving everday problems requiring single arithmetic operations, solving everyday problems requiring formulas, solving everday problems requiring multiple arithmetic operations). (Instructional Objectives Exchange).

Job Corps Diagnostic/Unit Mathematics Tests - The foundation of the Job Corps mathematics program are the Diagnostic/Unit tests. There is a D/UT for each of the 23 units in the program, with five different but equivalent forms for each test. When a D/UT is administered before the students enter a lesson, it is used as a diagnostic test. When a different but equivalent D/UT is used to assess mastery following an assignment in the unit, it is considered a unit test. Corpsmembers take a D/UT to determine if they must complete the corresponding assignment. Students who score 80 percent or higher on the diagnostic test may by-pass the assignment and proceed to the next unit's diagnostic test. (Job Corps).

Job Corps Mathematics Skills Inventory (MJSI) - Students are placed into the Job Corps mathematics program on the basis of their score on this instrument. The rating achieved on the MJSI slots students into one of four more precise screening tests. (Job Corps).

Job Corps MJSII Skills Inventory - The MJSII Should be given to all students who score 0-60 on the Job Corps Mathematics Skills Inventory (MJSI). Although there is no exact time limit for the MJSII, Corpsmembers should not be allowed more than 45 minutes to complete the test. (Job Corps).

Job Corps Reading Placement Test #1 (JCRP1) - The Job Corps Reading Placement Test #1 (JCRP1) is used to place students more precisely in a reading level. It is a compilation of the most valid items from tests which were formerly used in Job Corps. The items were revalidated on a large sample of Job Corps students in February, 1979. The test contains 64 items and takes exactly 35 minutes. (Job Corps).

Job Corps Reading Screening Test #1 (RJS1) - The Job Corps Reading Screening Test #1 (RJS1) provides an indication of the approximate level at which a corpsmember will enter the reading program. More precise placement will then be made by the Job Corps Reading Placement Test (JCRP1). The RJS1 will be administered to all corpsmembers. The time limit for completing the RJS1 is thirteen minutes. This time limit must be strictly observed. There are 27 questions on the RJS1. However, only 25 questions (3 to 27) are scored because questions one and two are samples. (Job Corps).

Leiter International Performance Scale - LIPS is an individually administered, non-verbal intelligence test which is appropriate for persons with speech and auditory handicaps, illiterates, the foreign born, and the educationally and culturally deprived. The test consists of a series of subtests which require matching, ranging from the pairing of like colors and objects to more complex relationships of designs and analogies. (Stoelting Company).

Metropolitan Achievement Tests--Reading Comprehension Test - MAT is a battery of norm referenced and criterion-referenced achievement tests designed for use with individuals through 12th grade level. The RCT is one element of this battery, and was designed to yield an instructional reading level for each pupil. MAT-RCT has an administration time of 40 minutes. (The Psychological Corporation)

Minimum Essentials Test - MET measures student achievement in reading, language, and mathematics, and provides information on the student's ability to apply basic skills to life situations. An optional writing test is included. The 124-item test requires about one and one-half hours to administer. The reading section covers literal comprehension, inferential comprehension, context clues, and main idea. The language section assesses knowledge in punctuation, capitalization, and sentence structure. The mathematics test covers basic arithmetic operation for whole numbers, fractions, decimals and percents. The life skills section tests the application of those skills in communication, finance, government and law, health, safety and nutrition, transportation, and occupations. (Scott, Foresman and Company).

Nelson-Denny Reading Test - This instrument assesses vocabulary, reading comprehension, and reading rate. It requires 30 minutes for completion. (Houghton-Mifflin Co.).

Otis-Lennon Mental Ability Test - This instrument measures verbal conceptualization, quantitative reasoning, general information, and ability to follow directions. It requires about 25-30 minutes to complete. (harcourt, Brace & World, Inc.).

Performance Assessment in Reading - PAIR provides identification of learner needs in basic reading skills, and instructional prescriptions referenced to these skills. The 72-item test is divided into two sections for administration: reading enabling skills and life role applications. Each section requires approximately 50 minutes to complete. Reading subtests include vocabulary, literal comprehension, critical comprehension, and location/study skills. Life role applications include pictorial representation, reference, forms and documents and rules and regulations. Local programs set the standards of mastery. (CTB/McGraw-Hill).

RBH Basic Reading and Word Test - This instrument was designed to aid in establishing minimum reading skills or literacy by measuring reading vocabulary and comprehension. The test, which covers a broad reading and vocabulary range, is recommended for use in situations where a quick measure of reading level is necessary. (Richardson, Bellows, Henry and Company, Inc.).

Senior High Assessment of Reading Performance - SHARP is a proficiency test that measures competencies in reading skills that are necessary for everyday life. SHARP is designed to be used as an outcome measure of a competency-based education program that emphasizes the student's ability to apply basic reading skills in the life-role situations. SHARP can be used to demonstrate to the schools and to the community that students have mastered the essential reading skills necessary for effective functioning as adults. (CTB/McGraw-Hill).

Sequential Tests of Educational Progress - These tests are available in four levels, suitable for grades 4-6, 7-9, 10-12, and 13-14. Each level contains six multiple-choice tests: reading comprehension, writing, mathematics, science, social studies, and listening comprehension. All tests are available in two parallel forms and are published in separate booklets that may be obtained individually. Each of the six tests requires 70 minutes and can be administered in a single session or in two 35-minute sessions. (Educational Testing Service).

Short Form Test of Academic Aptitude - SFTAA yields language and non-language scores, and consists of four subtests, including vocabulary, analogies, sequences, and memory. The five levels of the test span grades 1.5-12. Testing time is 31-38 minutes. (CTB/McGraw-Hill).

SRA Non Verbal Form - This instrument measures reasoning and concept formation independently of language and reading skills. Items consist of a series of drawings of people, objects or geometric forms, four of which are related. The examinee is required to discover the interrelating principle and indicate the drawing in each series that is most different. The test is recommended for use in screening individuals who have difficulty with reading or language or in screening for jobs in which reading and communication skills have little relationship to successful performance. (Science Research Associates, Inc.).

SRA Pictorial Reading Test - This test measures reasoning and concept formation which is relatively independent of language and reading skills. Items consist of five drawings or pictures, four of which are related. The examinee must discover the interrelating principle. The test is appropriate for selection and placement. It is especially useful with persons who have language or reading difficulties. Recommended usage is in the selection of applicants for jobs in which writing and communication skills contribute little to successful performance. The test can also be used by companies and agencies participating in retraining programs for displaced adult workers or school dropouts in order to identify persons most likely to benefit from the program. (Science Research Associates, Inc.).

Stanford Achievement Test - The elementary school portion of this battery, comprising four levels that span grades 1 to 9, yields scores in reading, language arts (chiefly spelling and language usage), arithmetic (computation, concepts, and applications), social studies, and science. The basic high school battery includes tests in English, numerical competence, mathematics, reading, science, social studies, and spelling. Additional high school tests are available in arts and humanities, business and economics, and technical comprehension in industrial arts. (Harcourt, Brace & World).

Stanford Test of Academic Skills - Each level of the TASK battery contains three subtests: reading, English and mathematics. Testing time is 80 minutes. (Harcourt Brace Jovanovich).

Stanford-Binet Intelligence Scale - This test covers an age range from two years to adult. It is individually administered, with items grouped by age levels. At preschool levels, items stress the ability to follow directions, identification of common objects and parts of the body, memory, and sensory-motor and perceptual skills. By about age six the emphasis shifts to verbal skills (e.g., vocabulary, analogies, similarities and differences), perceptual and verbal discriminations, and simple quantitative skills. At older ages, the item content becomes more verbal and more abstract. On the whole, the test is heavily weighted with verbal material, with quantitative skills playing a relative minor role. (Houghton Mifflin).

Steck-Vaughn Placement Survey for Adult Basic Education - This instrument is designed to assess skills from a nonreading level through 8th grade. Skills are assessed in the areas of reading, language, and mathematics and include phonics, vocabulary, comprehension, capitalization, punctuation, spelling, English usage, money, word problems, and operations with whole numbers. Test administration time is approximately 15 minutes for each section, or 45 minutes for the entire survey. A word list is used as an initial screening device to prevent learners from experiencing excessive frustration when taking certain parts of this survey. (Steck-Vaughn Company).

Sullivan Associates Programmed Reading System - SAPRS is the basis for instruction in the Job Corps beginning reading program. Placement into the Sullivan materials is determined by administering the Sullivan Placement Examination, a series of 16 short tests. (Job Corps).

Test of Adult Basic Education - TABE provides information about a student's level of achievement in the basic skills of reading, mathematics and language. It analyzes the needs of adults and out of school youth who wish to undertake vocational-technical training, general literacy, or self improvement study. There are three forms of TABE--easy, medium, and difficult. A locator test determines which level is appropriate for a participant. Test administration time ranges from 90 minutes for easy to 150 minutes for difficult. (CTB/McGraw-Hill).

Test of Everyday Writing Skills - TEWS is a competency test in writing or composition skills that assesses the application of these skills to everyday life situations. It measures virtually all aspects of writing that students need to perform as adults, including mechanics, spelling and punctuation, usage, and sentence and paragraph construction. (CTB/McGraw-Hill).

Tests of General Ability - TOGA is a nonverbal, pictorial measure of intelligence designed to be independent of reading, arithmetic, and other scholastic tasks. The test takes about 45 minutes and has a range from kindergarten through grade 12. Like many other nonverbal measures, TOGA is especially aimed toward children from culturally deprived backgrounds. An examinee's score on Part I of the test is a measure of the information, vocabulary, and concepts that he has acquired. The score on Part II is a measure of noncultural reasoning ability, and the total score is an overall, nonverbal measure of general intelligence. (Science Research Associates, Inc.).

Tests of General Educational Development - The GED was specifically designed to measure the educational achievements of people who have not graduated from high school. It assesses broad intellectual abilities and skills that do not depend on specific subject matter courses. Scores on the GED are used as the criteria for granting high school equivalency certificates. GED scores can also be used to gain admission to licensing examinations for professions which require the completion of the ninth, tenth, or eleventh grades. The tests included in the GED battery are correctness and effectiveness of expression, interpretation of reading materials in the natural sciences, interpretation of reading materials in the social studies, interpretation of literary materials, and general mathematical ability. (American Council on Education).

USES Basic Occupational Literacy Test - BOLT assesses basic reading and arithmetic skills of school dropouts for referral to occupational training or remedial education. The scores reported are: a) reading vocabulary, b) reading comprehension, c) arithmetic computation, and d) arithmetic reasoning. The instrument is essentially self administering and requires about one hour to complete. (U.S. Government Printing Office).

Wide Range Achievement Test - WRAT is an individual test for clinical use, indicating level of skill in oral reading, spelling and arithmetic computation. The examiner adjusts the testing range to the achievement level (kindergarten through college) of the individual. This is used in remedial and vocational studies of children and adults. The test time is fifteen to thirty minutes. (The Psychological Corporation).

Word and Number Assessment Inventory - WNAI measures verbal and mathematical abilities and then compares these scores with those of various educational and occupational groups at similar skill levels. It provides career information relevant to the scores and offers suggestions for improving word and number skills. The instrument is appropriate for persons at the 9th.-12th grade levels, as well as adults. (NCS Interpretive Scoring Systems).

D. Job-Specific Skills Assessment Instruments

Appraisal of Occupational Aptitudes - AOA consists of eight sub-tests: checking letters, checking numbers, filing names, filing numbers, posting names, posting numbers, arithmetic computation and reasoning, and using desk calculators. It is intended for selection and counseling regarding business and office careers. (The Psychological Corporation).

APTICOM - This computer based assessment tool consists of a desk top unit on which the examinee attempts to complete a number of tasks involving cognitive and manipulative abilities. APTICOM produces an aptitude profile, and requires about 90 minutes to administer. (Vocational Research Institutes - Jewish Employment and Vocational Service).

Aptitude Tests for Occupations - The tests provide useful information on individual aptitudes related to specific occupations and careers. They are for use with high school students, college students, and adults. The full battery is composed of six instruments which measure the following aptitudes: a) personal-social, b) mechanical, c) general sales, d) clerical routine, e) compulation, and f) scientific. Total completion time is 1 hour and 47 minutes. (PRO-ED).

Bennet Hand-Tool Dexterity Test - The Bennett Test measures manual dexterity and gross motor coordination. The subject is required to remove twelve bolts from one vertical board and replace them on another. Four tools are used in the task, two open end wrenches, one adjustable wrench, and one screwdriver. (The Psychological Corporation).

Bennet Mechanical Comprehension Test - BMCT measures the ability to perceive and understand the relationship of physical forces and mechanical elements in practical situations important for a wide variety of jobs, for engineering, and for many trade school courses. A high score on this trait indicates an ability to readily learn the principles of operation and repair of complex devices, and helps in the screening and selection of persons for occupations requiring mechanical aptitudes. The test requires 30 minutes to complete. (The Psychological Corporation).

California Ability Placement Survey - CAPS is designed to measure abilities keyed to entry requirements for the majority of jobs in fourteen occupational clusters. It is usable as a separate standardized battery or as a component of the California Occupational Preference System. The instrument is appropriate for individuals at the 7th-12th grade levels, and requires 50 minutes for completion. (Educational and Industrial Testing Service).

California Occupational Preference System - COPS furnishes job activity interests scores and relates those scores to curriculum choice and career preference. The COPS Interest Inventory has scales that assess interest areas including science, consumer economics, outdoors, business, clerical, communications, arts, service and technology. Total administration time is 35 to 55 minutes, including self-scoring. (Educational and Industrial Testing Service).

Card Punch Operator Aptitude Test - The instrument was developed for trainee selection. There are two separately timed parts - an 80 item letter-digit

substitution subtest and a 150 item name-checking subtest. The two are combined for a single total score. (International Business Machines Corporation).

Clerical Skills Series - CSS reports scores on skills appropriate to clerical occupations. Scores include areas such as: alphabetizing-filing, clerical speed and accuracy, grammar and punctuation, and vocabulary. (Martin M. Bruce Publishers).

Comprehensive Career Assessment Scale - CCAS yields familiarity and interest scores for 15 areas (such as business and office, construction, manufacturing and public service). It can be utilized for needs assessment, curriculum planning, and/or evaluation. (Learning Concepts).

Computer Programmer Aptitude Battery - CPAB is widely used for selecting applicants for computer training or employment. It provides scores on verbal meaning, reasoning, letter series, number ability, and diagramming, and takes 90 minutes to complete. (Science Research Associates, Inc.).

Crawford Small Parts Dexterity Test - The Crawford measures eye-hand coordination and fine finger dexterity. The first part requires the use of tweezers to place small pins in holes one at a time and then place a collar over it. Part two consists of starting screws in holes using the fingers and then using a small screwdriver to screw them down. (The Psychological Corporation).

Dental Hygiene Aptitude Testing Program - Developed to screen and select dental hygiene school applicants, DHATP provides scores on four scales, including numerical ability, study-reading, science, and general information. It takes 155 minutes to complete. (The Psychological Corporation).

Electrical Sophistication Test - This instrument separates persons with substantial knowledge of electricity from those with no, little and merely chance knowledge. It screens candidates for a wide variety of jobs and positions in which electrical knowledge is important to competent performance. The test is multiple choice and consists of 14 items. There is no time limit, but many candidates finish within five minutes. (Psychometric Affiliates).

Entrance Examination for Schools of Nursing - This instrument is used in screening and selecting nursing school applicants. It provides 7 ability scores (verbal, numerical, science, reading comprehension, arithmetic processes, general information and scholastic aptitude) and 6 personality scores (achievement, orderliness, persistence, congeniality, altruism, and respectfulness). EESN takes 210 minutes to complete. (The Psychological Corporation).

Entrance Examination for Schools of Practical Nursing - EESPN is used to screen and select practical nursing school applicants. It provides 5 ability scores (verbal, numerical, science, reading, and arithmetic fundamentals) and 6 personality scores (achievement, orderliness, persistence, congeniality, altruism, and respectfulness). Completion time is 210 minutes. (The Psychological Corporation).

Flanagan Aptitude Classification Tests - FACT consists of a battery of fourteen tests. Scores are reported for areas such as memory, precision, coordination, tables, planning, ingenuity, mechanics and assembly. The instrument relates to 30 occupations, mainly ranging from skilled to professional. (Science Research Associates, Inc.).

General Clerical Test - GCT is a group administered paper-and-pencil test designed to measure aptitudes which are of importance in clerical work of all kinds. The following subtests are included: a) checking-comparing names, addresses, and amounts and picking out the differences, b) alphabetizing - recording the number of a file drawer for names, c) arithmetic computation, d) error location - using addition and subtraction to find the error in a matrix, e) arithmetic reasoning - reading problems, f) spelling - finding and correctly spelling words, g) reading comprehension - answering questions about two paragraphs, h) vocabulary - selecting the word that means the same, and i) grammar - finding and correcting the error in a sentence. Total administration time is 50-55 minutes. (The Psychological Corporation).

Gordon Occupational Checklist - GOC reports 5 scores (business, outdoor, arts, technology, service) and 30 smaller interest clusters. Content covers 240 jobs not requiring college training. Total administration time is 20-25 minutes. (The Psychological Corporation).

IBM Aptitude Test for Programmer Personnel - Designed for use in screening and selecting applicants for computer programmer training, this instrument provides scores on letter series, figure series, and arithmetical reasoning. It takes 65 minutes to complete. (International Business Machines Corporation).

Individual Career Exploration - ICE provides an inventory of interests, experience, occupational choices and abilities in 8 occupations groups: service, business contact, organization, technology, outdoor, science, general culture, arts and entertainment. It contains picture and verbal forms, and reports five scores: first two occupational choices, decision level and two most important job values. (Scholastic Testing Service).

Jewish Employment Vocational Service Work Sample System - JEVS work sample vocational assessment gives descriptive evaluation and quantitative results on client occupational aptitudes, behavior and expressed interest. It has 28 work samples that are associated with 10 Worker Trait group arrangements in the Dictionary of Occupational Titles (DOT), 3rd ed. and with 12 work groups of three work areas in the DOT, 4th ed.. JEVS was designed for economically disadvantaged, unemployed/underemployed youth and adults and requires 5 to 7 six hour days to complete. Scores are provided on: nut, bolt and washer assembly; rubber stamping; washer threading; budget book assembly; sign making; tile sorting; nut packing; collating leather samples; grommet assembly; union assembly; belt assembly; ladder assembly; metal square fabrication; hardware assembly; telephone assembly; lock assembly; filing by numbers; proofreading; filing by letters; nail and screw sorting; adding machine; payroll computation; computing postage; resistor reading; pipe assembly; blouse making; vest making; and condensing principle. (Vocational Research Institute - Jewish Employment and Vocational Services).

MacQuarrie Test for Mechanical Ability - The MacQuarrie contains seven subtests. The first three - Tracing, Tapping, and Dotting - measure eye-hand coordination and finger dexterity. The last four - Copying, Location, Block Counting, and Pursuit - place more emphasis on reasoning about objects in a plane and in space. The test takes about 20 minutes to administer, and has been used in selecting inspectors, assemblers, draftsmen, blueprint readers, power sewing machine operators, machinists, and tool and die designers, among other skilled tradesmen. (CTB/McGraw-Hill).

Manipulative Aptitude Test - MMA measures eye-hand coordination and manual dexterity. It involves two basic tasks (one using the preferred hand and one using both hands) which require movement of hands, arms, and fingers in thrusting and twisting motions. A rectangular plexiglass board with sockets and a T-bar are used. (Western Psychological Services).

Mechanical Handyman Test - This instrument is used to screen and select maintenance workers, and takes 130 minutes to complete. (Public Personnel Association).

Micro-Tower - This is a group aptitude for special needs populations that contains 13 work samples: electronic connector assembly, bottle capping and packing, lamp assembly, blueprint reading, graphic illustration, filing, mail sorting, zip coding, recording, checking, making change, payroll computation, want ad comprehension, and message taking. (Institute for Crippled and Disabled).

Minnesota Clerical Test - MCT is a test of speed and accuracy in performing tasks related to clerical work. The test consists of two parts: number checking and name checking. The subject identifies whether the 100 numbers and 100 name parts are identical or dissimilar. (The Psychological Corporation).

Minnesota Rate of Manipulation Test, 1969 Edition - MRM is designed to assess arm-hand dexterity. This test consists of a formboard with 60 round holes and 60 cylinders which are placed into the holes. There are five subtests, each requiring a different manipulative activity, i.e., placing, turning, displacing, and one-hand and two-hand turning. There are norms and instructions for the blind. (American Guidance Service, Inc.).

Minnesota Spatial Relations Test - MSRT consists of four parts. Each part requires the transfer of 58 blocks of assorted sizes and shapes from one board to another. Each block will fit only one hole in the board. (American Guidance Service, Inc.).

National Institute for Automatic Service Excellence Automotive Mechanic Testing and Certification Program - NIASE offers a testing and certification program to automotive mechanics. Twice yearly, in over 270 locations nationwide, the Institute gives a series of written tests which measure diagnostic and repair skills.

When an automotive technician passes one or more of these tests, and meets the two-year experience requirement, he or she earns the right to wear the NIASE patch. Since the NIASE program began in 1972, nearly a quarter of a million pros have passed tests and earned their certificates. Certified mechanics are leaders in the drive for excellence in automotive repair. NIASE tests mechanics in eight automobile, six heavy-duty truck, and two body/paint

specialty areas. Auto tests are: engine repair, automatic transmission/transaxle, manual drive train and axles, front end, brakes, electrical systems, heating and air conditioning, and engine performance. Body repair and painting/refinishing tests also are offered.

Each test is made up of between 40 and 80 multiple-choice questions, written by automotive experts from all parts of the industry. All questions are quality-checked by a panel of technical service representatives from domestic and import vehicle manufacturers, repair and test equipment manufacturers, and parts manufacturers, plus working mechanics and vocational educators. Tests are administered under strict security conditions, with the questions changed each time the test is given. (National Institute for Automotive Service Excellence).

N.I.I.P. Engineering Apprentice Selection Test Battery - This instrument is used to screen and select engineering apprentices. It measures spatial perception, nonverbal intelligence, arithmetic attainment, mechanical ability and information, and takes 180 minutes to complete. (National Institute of Industrial Psychology).

NLN Aide Selection Test - This instrument is used to screen and select applicants for aide positions in hospitals and home health agencies. It requires 35 minutes for completion. (National League for Nursing, Inc.).

O'Connor Finger Dexterity Test - This test was designed to assess motor coordination and finger and manual dexterity. Using a plate with 100 holes arranged in ten rows, the subject inserts small metal pins in each of the holes, in groups of three, as rapidly as possible. (Stoelting Company).

Ohio Trade and Industrial Education Achievement Tests - Tests are administered annually at participating schools. Each student must take two tests - the intelligence test and a trade achievement test. The 16 trade tests are in areas such as auto body, auto mechanics, basic electricity and electronics, cosmetology, dental assisting, health occupations, industrial electronics, machine trades, mechanical drafting, printing, sheet metal, and welding. (Instructional Materials Laboratory - Ohio State University).

Pennsylvania Bi-Manual Worksample - PBW measures hand and finger dexterity. The first part (assembly) requires manually assembling bolts and nuts and then placing them in a hole in the board. The second part (disassembly) requires removing the assemblies from the hole, taking them apart and returning the parts to their bins. (American Guidance Service, Inc.).

Purdue Pegboard - The Purdue Pegboard measures manual dexterity using a pegboard that contains two rows of 25 holes into which pins are inserted using the right hand, and both hands; then pins, washers, and collars are assembled using both hands. (Science Research Associates, Inc.).

Purdue Personnel Tests - PPT's measure job related technical information. They include, among others, trade tests for such occupations as carpentry, welding, sheet metal work, and engine lathe operation. (University Bookstore - Purdue University).

Purdue Test for Electricians - PTE was designed to aid industry and vocational schools in determining the amount of knowledge of electricity and electrical operations possessed by applicants or students. (Science Research Associates, Inc.).

RBH Industrial Questionnaire - This is a measure of general ability designed for use in the screening of basic blue collar employees, unskilled laborers and routine factory workers, operatives and craftsmen, and others involved in the electric utility, paper, ore, and chemical industries. Items cover reading comprehension, arithmetic reasoning, and chemical comprehension. The publisher states that the absence of a formal time limit makes the test useful in borderline cases where limited education or limited knowledge of the English language handicaps otherwise desirable applicants. (Richardson, Bellows, Henry and Company, Inc.).

RBH Non-Verbal Reasoning Test - Long Form - This instrument is a non-verbal and non-language test designed for use in batteries for the screening of technicians, engineers, engineering aids, technical salesmen, and any population for whom language presents a problem. The examinee must be able to read numbers in order to be tested since he must identify the illustrations and record his answers. The test measures reasoning and concept formation through the use of symbols and geometric figures. Some of the items are concerned with concepts such as: tangents, angle bisection, vertical-horizontal arrangement, and squareness. (Richardson, Bellows, Henry and Company, Inc.).

RBH Non-Verbal Reasoning Test - Short Form - This test measures reasoning and concept formulation through the use of symbols and geometric figures. It is non-verbal and non-language, and is appropriate for use in the selection of operatives and craftsmen, basic blue collar and unskilled labor positions, routine factory personnel, and any population for which language is a problem. (Richardson, Bellows, Henry and Company, Inc.).

The Self-Directed Search - SDS is a self-adminstered, self-scored, and self-interpreted tool that evaluates work related interests and abilities. It provides measures on six occupational scales - realistic, investigative, artistic, social, enterprising and conventional, and takes between 45-60 minutes. (Consulting Psychologists Press, Inc.).

Short Occupational Knowledge Tests - SOKT's measure knowledge of current content and concepts in each field, and are used by employers to differentiate between knowledgeable applicants and those having a limited understanding of the job. Tests are for the following occupations: auto mechanics, bookkeepers, carpenters, drafters, electricians, machinists, office machine operators, plumbers, secretaries, tool and die makers, truck drivers and welders. (Science Research Associats, Inc.).

Short Test of Clerical Ability - This instrument measures seven areas: arithmetic, business vocabulary, checking, coding, directions - oral and written, filing, and language. The test can be used for job placement purposes, and is intended for use with office positions. (Science Research Associates, Inc.).

Singer Vocational Evaluation System - SVES provides both vocational assessment and occupational exploration and identifies abilities, interests and work tolerances for vocational training. It consists of a series of 24 work sampling stations which represent the most common jobs found in the Dictionary of Occupational Titles (DOT). SVES measures client proficiencies in the following job areas: sample making, bench assembly, drafting, electrical wiring, plumbing and pipefitting, carpentry, refrigeration-heating-air conditioning, soldering-welding, office and sales clerk, needle trades, masonry, sheet metal, cooking and baking, engine service, medical service, cosmetology, data calculation and recording, soil testing, photo lab technician, and production machine operating. (The Singer Company).

SRA Mechanical Aptitudes - This is a group administered, multiple choice paper and pencil test. It contains three sections: a) mechanical knowledge - 45 pictures of commonly used tools and implements are identified and/or their use is given, b) space relations - 40 figures cut into two or three pieces which are mentally formed into a whole, and c) shop arithmetic - 124 problems, most of which are based on drawings. (Science Research Associates, Inc.).

SRA Test of Mechanical Concepts - This test reports four scores: mechanical interrelationships, mechanical tools and devices, spatial relations, and total. It may be used to evaluate individuals for hire, promotion, or training for jobs like assembler, machinist, factory production worker, or maintenance mechanic. (Science Research Associates, Inc.).

Stromberg Dexterity Test - SDT is designed to aid in choosing workers for jobs requiring speed and accuracy of arm and hand movement. It consists of 54 red, blue and yellow discs and a durable board containing 54 holes on one side. The subject is scored on the amount of time it takes to complete the task. (The Psychological Corporation).

Student Occupational Competency Achievement Tests - SOCAT consists of two parts - written and performance. The written test, which has a multiple choice format, covers factual knowledge, technical information, understanding of principles, and problem-solving abilities related to a particular occupation. The performance test, which is administered in a laboratory, school shop, or clinical setting, consists of work assignments designed to sample the manipulative skills required in an occupation. SOCATs enable students to demonstrate that they possess the knowledge that competent craftspersons employ in their daily work. In addition, a mental aptitude test is available for administration at the same time as the competency test. Thus, a one page printout can be provided for each student which indicates mental aptitude along with written and performance scores on the competency test. Any teacher, guidance counselor or test administrator can administer the aptitude test and the written multiple choice achievement test. A journeyman tradesperson or business representative with technical expertise in the occupation should administer the performance test.

Presently SOCATs are available in the following fields: accounting/ bookkeeping, agriculture mechanics, auto body, auto mechanics, construction electricity, drafting, general merchandising, general office, heating and air conditioning, horticulture, industrial electronics, machine trades, practical nursing, printing, radio and TV repair, refrigerator, sewn products, small engine repair, and welding. Tests will soon be available in eleven additional occupations, including banking, savings and loan, cabinetmaking, carpentry,

commercial foods, computer programming, construction masonry, industrial electricity, medical assisting, plumbing, production agriculture, truck and bus mechanics.

SOCATs were designed to measure end of program accomplishment, and are a key to competency-based vocational education. Students will be able to demonstrate their competence on a national test and use the test results as a credential for employment or advanced standing in educational programs. SOCAT results will also enable employers to hire individuals on the basis of demonstrated levels of competence, as opposed to letter grades, which lack definition. (National Occupational Competency Testing Institute).

Talent Assessment Program - TAP is a battery of ten instruments which measure dexterity, visual and tactile discrimination, and memory as they relate to the functional level of career related attributes and worker trait factors. This identification of vocational aptitudes facilitates training program assignment and job placement. Scores are provided on visualizing structural detail, sorting - size and shape, sorting - color, sorting by touch, handling small materials, handling large materials, using small tools, using large tools, visualizing flow paths, and memory for structural detail. TAP's appropriate for individuals age 13 and over who are at the 8th grade level. Total administration time is 160 minutes. (Talent Assessment, Inc.).

System Approach to Vocational Evaluation - SAVE provides an organizing framework for work-sample type vocational evaluation of disadvantaged and disabled clients. Most needed materials will already exist in schools, evaluation facilities, or industrial arts classes. The SAVE package was developed primarily to provide a way to obtain vocational evaluation information organized according to 47 worker trait groups within the Dictionary of Occupational Titles (DOT). The SAVE approach is unique in that commercially available work samples can be substituted for many of its components, and thus SAVE can be used as a structure for setting up a vocational evaluation work sample system in a variety of formats. (SAVE Enterprises).

Test of Retail Sales Insight - TRSI is a measure of knowledge of selling and sales transactions which can be administered to persons whose reading level is grade six or higher. The test can be administered orally to individuals whose reading level is questionable or below grade six. Subscores are: general sales knowledge, customer motivation and need, merchandise procurement and adaptation, sales promotion procedures, and sales closure. (Psychologists and Educators, Inc.).

TOWER (Testing, Orientation and Work Evaluation in Rehabilitation - TOWER is used to appraise the vocational potential of disabled persons. In includes fourteen broad areas of work evaluation: clerical, drafting, drawing, electronics assembly, jewelry, leather-goods, lettering, machine shop, mail clerk, optical mechanics, pantograph engraving, sewing, workshop assembling, and welding. (Institute for Crippled and Disabled).

USES Clerical Skills Tests - The six clerical tests developed by the United States Employment Service measure skills important in a variety of clerical occupations. The skills measured include typing from plain copy, ability to take dictation, general spelling, statistical typing, medical spelling, and legal spelling. (U.S. Government Printing Office).

USES General Aptitude Test Battery - The GATB, developed by the United States Employment Service was designed on the basis of job analyses and a factor analysis of 59 tests, and is composed of eight paper-and-pencil and four apparatus tests. These 12 tests in combination yield scores on nine factors: Intelligence (G), Verbal Aptitude (V), Numerical Aptitude (N), Spatial Aptitude (S), Form Perception (P), Clerical Perception (Q), Motor Coordination (K), Finger Dexterity (F), and Manual Dexterity (M). Raw scores on the nine factors are converted to percentile ranks or standard scores having a mean of 100 and a standard deviation of 20. The standard scores of an examinee can then be compared with those of the 36 or so occupational aptitude patterns (OAP's) determined from an analysis of the GATB scores of people in over 800 jobs. An OAP consists of minimum scores (cutting scores) on the tests that are considered essential for effective performance in that occupation. The entire GATB takes 2 1/2 hours to administer, and is appropriate for senior high students (usually twelfth graders) and adults. (U.S. Government Printing Office).

USES GATB-NATB Screening Device - The United States Employment Service designed this instrument to help determine whether clients should take the General Aptitude Test Battery or the Nonreading Aptitude Test Battery. (U.S. Government Printing Office).

USES Specific Aptitude Test Batteries - SATBs consist of combinations of two, three, or four GATB aptitudes with associated cutting scores. More than 450 of these have been developed by the United States Employment Service for use in selecting untrained or inexperienced applicants for referral to specific jobs or occupational training. (U.S. Government Printing Office).

VALPAR Component Work Sample System - VALPAR Work Samples assess vocational and functional skills designed to be used in conjunction with other testing instruments. They provide both the measures and clinical observations required for job placement, selection of training programs, and the development of educational plans. Scores are furnished on - small tools; size discrimination; numerical sorting; upper extremity range of body motion; clerical comprehension and aptitude; independent problem solving; multi-level sorting; simulated assembly; whole range of body motion; tri-level measurement; eye-hand-foot coordination; soldering and inspection (electronics); money handling; integrated peer performance; electrical circuitry and print reading; and drafting. VALPAR work samples can be used with almost any population, and require no reading except on items where the job would require it. Time varies from 10 minutes to 6 hours per work sample. (Valpar Corporation).

Vocational Competency Measures Project - Between October 1979 and December 1982, the American Institutes for Research was engaged in a nationwide effort to develop, field test, and validate 17 occupational competency tests under the sponsorship of the U. S. Department of Education. The project promoted the acceptance of student competency testing in vocational education and helped stimulate the continuing development of occupational competency tests.

After extensive interaction with many leaders in vocational education, the following occupations were selectd for the development of competency tests including cognitive, affective and performance elements:

Agriculture - Agricultural Chemicals Applications Technician, Farm Equipment Mechanic
Business and Office - Computer Operator, Word Processing Specialist
Distributive Education - Apparel Sales, Fabric Sales, Grocery Clerk, Hotel/Motel Front Office
Health - Dental Assistant, Physical Therapist Assistant
Home Economics - Custom Sewing, Restaurant Service (Waiter, Waitress, Cashier)
Technical - Electronics Technician, Water Treatment Technician, Wastewater Treatment Technician
Trade and Industry - Carpenter, Diesel Mechanic

The competency tests are intended to serve two major purposes: a) to help teachers and administrators of secondary and postsecondary vocational education programs evaluate and improve specific areas of their vocational programs, and b) to provide an objective basis for informing students, teachers, and prospective employers about the progress made by students in acquiring specific, job-related competencies. Employers may also find the tests useful for helping in selecting new employees and assessing objectively the training needs of present employees.

Each test package includes the following items:

- paper-and-pencil test - two parts, each part requiring no longer than one class period to administer
- a complete set of the "hands-on" performance tests for that occupation, each test containing examiner and examinee instructions, appropriate test props, and a test record sheet; the number of performance tests in each package ranges from 4 to 13
- Work Habits Inventory, for use as a teaching and counseling tool in job survival skills, and
- an Examiner's Manual, including directions for test administration, a summary of how the tests were developed, technical data on test reliability and validity, and scoring keys for the tests and the Work Habits Inventory.

AIR has established the usefulness of these instruments through extensive field testing and evaluation. (American Institute for Research).

Vocational Information and Evaluation Work Samples - VIEWS was specifically designed for the evaluation of mentally retarded persons. its 16 work samples are from four fields of work and assess client performance on six Worker Trait Group Arrangements appropriate to jobs which may be held by mentally retarded individuals. VIEWS evaluates occupational potential and work related behaviors for formulating Individual Education Plans (IEPs) and for recommending training, placement, and work adjustment programs. The total process encompasses 5 six hour days. Scores are provided on - tile sorting; nuts, bolts and washer sorting; paper count, cutting, collating and stapling;

stamping; nuts, bolts and washer assembly; screen assembly; machine feeding; mail sort; mail count; nut weighing; valve disassembly; drill press; budgette assembly; valve assembly; and circuit board assembly. Objective observations are made concerning interpersonal relations, communications skills, responses to training techniques and supervision, attendance, punctuality, grooming, and dress. (Vocational Research Institute - Jewish Employment and Vocational Service).

Vocational Interest and Sophistication Assessment - VISA provides a reading-free picture instrument to obtain a measure of an individual's interest in and knowledge about a series of job options at the unskilled and semi-skilled levels. It is targeted toward mildy retarded adolescents and young adults, and takes between 30-60 minutes to complete. (O.S.U. Nisonger Center).

Wesman Personnel Classification Tests - WPC is a test of mental ability designed for use in the selection of employees for clerical, sales, supervisory, and managerial positions. The verbal subtest requires the use of reasoning through analogy and the perception of relationships in order to correctly respond to the item. The numerical subtest measures competence in basic arithmetic skills and processes and general facility in the use of numerical concepts. (The Psychological Corporation).

Wide Range Employment Sample Test - WREST was developed to measure work productivity on the basis of quantity and quality. Its main purposes are to a) determine horizontal or technical skills, b) provide a standardized method of job skill learning, c) identify employability level, and d) assist in job selection. Scores are provided on folding, stapling, packaging, measuring, stringing, gluing, collating, color matching, assembling, and pattern matching. This tool may be used with individuals age 16 through adult in the general population, as well as sheltered workshop and industrial settings. Total administration time is 2 hours. (Jastak Associates, Inc.).

E. Other Useful Assessment Instruments

1. PRE-TESTING PROCEDURE

Test Orientation Procedure - This package contains a tape recording and two booklets. It was designed specifically for disadvantaged job applicants with little prior testing experience. The first booklet, used together with the tape, provides general information on how to take tests. The second contains practice tests. In the absence of a tape recorder, the examiner may need instructions from a printed script. (The Psychological Corporation).

USES Pretesting Orientation Exercises - POEs were developed by the United States Employment Service to provide practice for the disadvantaged individuals who will be taking the GATB. The exercises themselves, the format of the test booklet used with them, and the manual containing directions for administration all closely resemble their GATB counterparts. A standard GATB answer sheet actually is used to complete the exercises. The exercises have been designed to reduce differences in aptitude scores resulting from disadvantaged clients being less familiar with test content, less able to understand test direcions and having less frequent experience in taking tests of any kind. (U.S. Government Printing Office).

USES Pretesting Orientation on the Purpose of Testing - This is a short, illustrated lecture and discussion technique that has been designed to reduce anxiety and increase motivation for testing in disadvantaged individuals by delivering information about the purposes of testing. In the half-hour orientation session a group listens to a narrator read from a prepared script of 23 topics, each with an accompanying picture. Thirteen of the topics pertain to what an aptitude test is and why it is administered, and ten provide test taking tips. (U.S. Government Printing Office).

2. VOCATIONAL INTERESTS

AAMD-Becker Reading - Free Vocational Interest Inventory - The Inventory is a non-reading vocational preference test which identifies areas and patterns of occupational interests in mentally retarded people at the unskilled and semi-skilled levels. Scores are provided on automotive, building trades, clerical, animal care, food service, patient care, horticulture, janitorial, personal service, materials handling, laundry service, light industrial and housekeeping scales. Total administration time is 45 minutes or less. (American Association on Mental Deficiency).

Career Assessment Inventory - CAI is intended for students who are not seeking baccalaureate degrees, and who are undecided about their vocational plans. It is designed for individuals seeking career opportunities requiring a minimum of post-secondary education such as community college, technical training, or business school. Their interests are compared with those of workers in occupations needing less than a four-year college education. Target population includes 8th grade through adults. Total administration time is 40 minutes. (NCS Interpretive Scoring Systems).

Career Guidance Inventory - CGI was designed for counseling students with interests in trades, services, and technologies. Scores are reported for 14 engineering related trades (such as masonry, painting and decorations, electrical engineering) and 11 non-engineering related services (such as communications, data processing, and sales). (Educational Guidance, Inc.).

Career Guidance Inventory in Trades, Service and Technologies - CGI is a special interest inventory designed for students who are not planning on four or more years of college. It aids counselors who help students or adults plan career objectives. There are 25 scales for which CGI produces scores, such as carpentry and woodworking, masonry, mechanical repair, sheet metal and welding, drafting and design technology, chemical and laboratory technology, environmental health technology, agriculture and forestry technology, business management, communications, sales, transportation services, protective services, medical technology - laboratory, medical technology - nursing, food service, and several engineering technologies. (CTB/McGraw-Hill).

Harrington-O'Shea Career Decision-Making System - CDM is a self administered assessment tool which measures vocational interests, occupational abilities, and work related values. It is targeted for 7th grade to adults and provides scores on six interest areas including crafts, the arts, social, business, clerical and science. Total administration time is 45 minutes. (Amercian Guidance Services).

How Well Do You Know Your Interests? - This instrument was designed to collect information about likes and dislikes of certain jobs, activities, things, and people. It yields a 55 item profile of occupational interest factors to guide the student's career exploration and decision making. (Edupac, Inc.).

Interest Determination, Exploration and Assessment System - IDEAS is a self-scorable interest inventory which provides scores in mechanical/fixing, electronics, nature/outdoors, science, numbers, writing, arts/crafts, social service, child care, medical service, business, sales, office practices, and food service. It is intended for grades 6-12, and has a total administration time of 30-40 minutes. (NCS Interpretive Scoring Systems).

Jackson Vocational Interest Survey - JVIS was designed to provide scores representing interests and preferences relevant to work. There are 34 basic scales, including creative and performing arts, mathematics, skilled trades, dominant leadership, business, sales, law, human relations, management, and professional advising. It is appropriate for high school to adult levels, and takes one hour to administer. (Research Psychologists Press, Inc.).

Judgement of Occupational Behavior - Orientation - JOB-O is an exploratory instrument keyed to the top 120 jobs that show growth potential in the coming decade. It is updated every two years, with job titles added or deleted in accordance with predictions in the Occupational Outlook Handbook. The self assessment phase narrows job titles to those best matching personal needs. JOB-O is appropriate for 7th grade through adult levels and takes between 45-75 minutes. (CFKR Career Materials, Inc.).

Kuder Career Development Inventory - KCDI indicates possible career paths to explore in each of six broad interest areas at three levels of entry based on the amount of education generally required. Scores are provided in the following occupational clusters: technical/mechanical/skilled, scientific/theoretical, artistic/literary/musical, social service/personal service, persuasive/managerial, and clerical/computational. This instrument is appropriate for out of school youth, as well as those in the 9th and 10th grades, and takes 60-75 minutes to administer. (Science Research Associates).

Kuder General Interest Survey - Form E - This instrument measures broad vocational interests and is most appropriate at the junior high school level. It takes between 40-50 minutes to administer, and provides scores in outdoor, mechanical, computational, scientific, persuasive, artistic, literary, musical, social service, and clerical areas. (Science Research Associates, Inc.).

Kuder Occupational Interest Survey - Form DD - This tool measures occupational interests of 10th to 12th grade and adult populations. Scores are provided on 126 occupational and 48 college major scales. Total administration time is approximately 40 minutes. (Science Research Associates Inc.).

Kuder Preference Record - Vocational - This instrument is used for counseling and placement of high school students and adults. It provides ten interest scales, including outdoor, mechanical, scientific, computational, persuasive, artistic, literary, musical, social service, and clerical. Completion time is 30-40 minutes. (Science Research Associates, Inc.).

Minnesota Vocational Interest Inventory - MVII contains nine general interest measures, including mechanical, health service, office work, electronics, food service, carpentry, sales, and outdoors. It also yields 21 occupational scales for skilled jobs such as baker, carpenter, and plumber. (The Psychological Corporation).

Ohio Vocational Interest Survey, Second Edition - OVISII assesses interest in 24 occupational clusters including manual work, basic services, machine operation, quality control, clerical, health services, crafts and precise operations, skilled personal services, sports and recreation, customer service, regulations enforcement, communications, numerical, visual arts, agricultural and life sciences, engineering and physical sciences, music, performing arts, marketing, legal services, management, education and social work, and medical service. Between 35-60 minutes are required for administration. (The Psychological Corporation).

Peabody Individual Achievement Test - PIAT is an individually administered, wide-range achievement battery with subtests in mathematics, reading recognition, reading comprehension, spelling, and general information. No written responses are required by the subject - he responds orally or by pointing. The mathematics subtest measures basic skills such as matching, discrimination, and number recognition - as well as advanced concepts in geometry and trigonometry. In the reading recognition subtest, the examinee is required to match letters of the alphabet, name individual letters, and read aloud individual words. The items in this subtest range in difficulty from the preschool through high school level. For the reading comprehension subtest, the examinee silently reads a sentence and then must select the one of four illustrated options which best represents the meaning of the sentence. The item difficulty range for the spelling subtest is kindergarten through high school For this subtest, the examinee is asked to select the letter of the alphabet as being different from the other items pictured, identify the letter that represents a speech sound or named letter, and point out the correct spelling for individual words which have been pronounced and used in sentences by the examiner. Topics such as science, social studies, fine arts, and sports are included on the general information subtest designed to tap general knowledge which can be acquired in situations other than school. (American Guidance Services, Inc.).

Picture Interest Exploration Survey - PIES was designed to help in the investigation of individuals' vocational interests and to apply this information to pursuing career goals. A PIES test kit includes 160 color slides, 2 slide trays, 1 audio tape, 2 sets of career reference cards, 1 student-teacher manual, and 50 response sheets. Colored 35mm slides are utilized to depict 12 specific careers within each of 13 career clusters. The career-cluster system is based on the Occupational Outlook Handbook and is cross-referenced to the Dictionary of Occupational Titles. Each slide shows a worker's hands performing a task considered to be representative of a particular occupation within a career cluster. Users indicate interest in a particular career by circling the number of that slide on their response sheet. The survey may be administered individually, in a group, or self-administered. (Educational Achievement Corporations).

Planning Career Goals - PCG assesses a variety of abilities, interests, values and occupational information pertinent to 12 fields of work. This battery of tests assists individuals at the 8th to 12th grade levels in making realistic educational and career plans. Planning is based on a) knowledge of one's own traits and preferences and b) comparisons with people who are actually employed in the person's preferred career. Test time is approximately 4 hours and 45 minutes. (CTB/McGraw-Hill).

Strong-Campbell Interest Inventory - SCII measures an individual's occupation interests, not aptitude or intelligence, by comparing his/her scores on a number of scales with scores of a) people in general and b) people in a wide variety of occupations. It has six general occupational themes, 23 basic interest scales, and 162 occupational scales. This instrument is appropriate for 8th grade through adult levels, and requires 20-60 minutes to administer. (Stanford University Press).

USES Interest Inventory - This instrument provides measures of occupational interest in the 12 interest areas into which all 4th edition DOT-defined occupations have been classified in the USES Guide for Occupational Exploration. The 12 scales include artistic, scientific, plants and animals protective, mechanical, industrial, business detail, selling, accommodating, humanitarian, leading-influencing, and physical performing. The interest inventory can be completed within 15-20 minutes. (U.S. Government Printing Office).

Wide Range Interest-Opinion Test - WRIOT was developed to determine interests and attitudes of individuals regardless of age, sex, mental ability, cultural background, or educational level. It does not require reading or language understanding and can be used with a translation of the instructions and report form in any language. The instrument consists of 150 sets of three line drawings, each depicting people working at some activity. The test-taker responds to each set with the most and least preferred. Completion time is approximately 40 minutes. (Jastak Associates, Inc).

World of Work Inventory - WWI facilitates selection of an appropriate career or vocation consistent with personal interests, aptitudes and temperaments. Scores are provided on the following scales: career interest activities, job satisfaction indicators, and vocational training potentials. The instrument is appropriate for 8th grade through adult levels, and requires 2 1/2 hours to complete. (World of Work, Inc.).

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NEW YORK STATE DIVISION FOR YOUTH

YOUTH EMPLOYMENT SERVICES

Mission

To ensure a comprehensive array of quality employment services which furthers the youth development, delinquency prevention, and rehabilitation efforts of the Agency. Toward this end, Youth Employment Services shall:

* identify statewide youth employment priorities and needs;
* plan youth employment systems and designs;
* recommend youth employment policies, procedures, legislation and accountability mechanisms; and
* provide technical assistance in employment-related areas.

The scope of these efforts is Agency-wide and includes Division for Youth facilities and aftercare, locally operated (Agency funded) programs and appropriate public and private institutions

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